



MIXMOR

MIXMOR MIXERS

FOR EVERY INDUSTRY

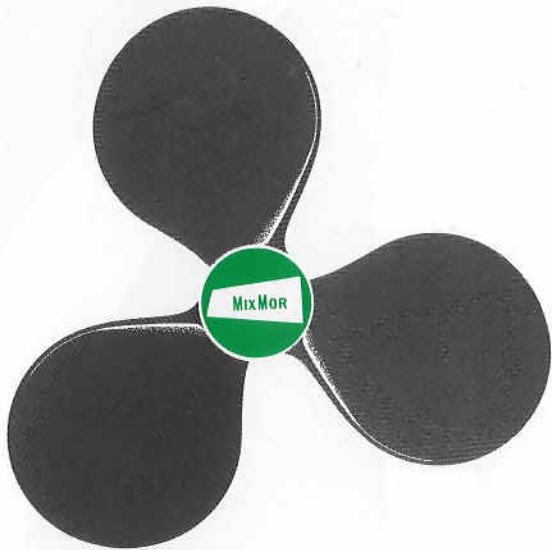


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VARIABLE SPEED DRIVE

MIXMOR THROUGH THE YEARS

MIXERS FOR EVERY INDUSTRIAL APPLICATION

PERFORMANCE IS OUR CREED

Industrial mixers can be designed and built to any level of quality, to sell at any price. But only the uninitiated or impractical buyer will consign the fate of his end product to an "economy" mixer that is inadequate for the job.

At MixMOR, we understand the economics of mixing. We know that the user's profits are adversely affected when mixer problems lead to substandard products or production downtime.

That is why we build assured performance into every MixMOR unit. The fact that they are still competitively priced is due, not to compromises in quality and capability, but to design simplicity and volume production. Here are just a few of the features that contribute to MixMOR reliability:

DEPENDABLE MOTORS. For top entry propeller or portable mixers, all electric motors are either totally enclosed

or explosion-proof, single or three phase, NEMA Style C footless. Side entry and turbine units use standard foot mounted motors with choice of enclosure. All motors are standard models of well-known manufacturers and may be replaced from shelf stock.

LASTING LUBRICATION. Motor and shaft bearings are grease sealed and require no lubrication for the life of the bearing. Propeller mixer gear housings are grease packed before shipment and need no relubrication for one year at temperatures up to 250°F.

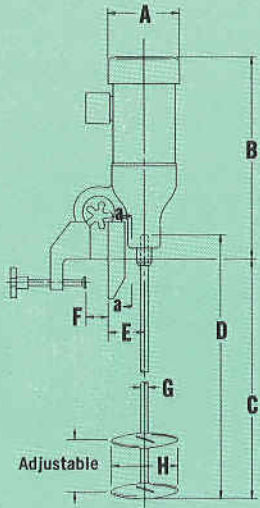
TRUE-RUNNING SHAFTS. Shafts are precision-ground and polished, and are carefully straightened under test to eliminate runout that could shorten bearing life.

EFFICIENT PROPELLERS. Propellers are square pitch and sized to suit the job. All propellers are statically balanced for vibration-free operation.

DIRECT DRIVE. The mixer drive assembly components are factory aligned and tested, and are shipped as a package for jobsite mounting. The drive assembly includes an electric or air motor with prelubricated ball bearings. The motor has a NEMA Style C footless mounting for direct connection to the quill housing. Because of the direct drive design, full motor speed is transmitted to yield mixer shaft output speed of 1750 rpm for 1/4 thru 3/4 horsepower and 1150 rpm for 1 thru 5 horsepower.

The lower chuck component consists of an aluminum housing containing a widely spaced, prelubricated, double-sealed ball bearing to provide outboard support of the chuck shaft, which is subject to mixing stresses.

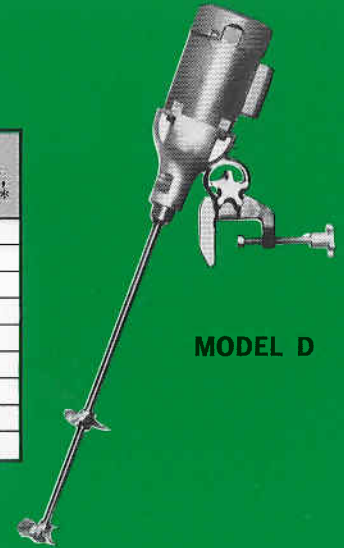
The swivel ball-and-socket mixer mounting arrangement attached to the quill housing is designed to allow 360° rotation on the horizontal plane and 90° on the vertical plane so proper positioning of the shaft and propellers can be achieved at the jobsite. A single or double (depending on hp) aluminum hand-wheel assembly is provided for mounting the bronze clamp on the tank wall.



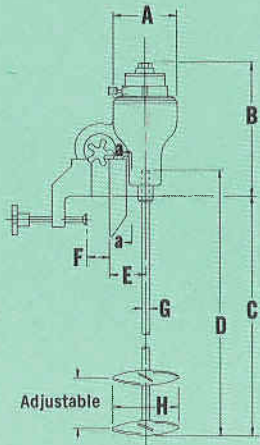
DIRECT DRIVE - ELECTRIC

MODEL	HP	DIMENSIONS, INCHES								H DUAL PROP. DIA.	WEIGHT, POUNDS*
		A	B	C	D	E	F	G			
D-14	1/4	6	17	35	36	3	3	5/8	3 1/2	34	
D-13	1/3	6	17	35	36	3	3	5/8	4	35	
D-12	1/2	7	20	46	48	3 3/4	3 3/4	5/8	4 1/2	52	
D-34	3/4	7	21	46	48	3 3/4	3 3/4	5/8	5	55	
D-11	1	7	21	58	60	3 3/4	3 3/4	7/8	6	85	
D-15	1 1/2	9	21	58	60	3 3/4	3 3/4	7/8	6 1/2	112	
D-2	2	9	23	58	60	3 3/4	3 3/4	7/8	7	123	
D-3	3	11	24	58	60	3 3/4	3 3/4	7/8	7 1/2	159	
D-5	5	11	25	58	60	3 3/4	3 3/4	7/8	7 1/2	182	

*Weight may vary with motor specifications.



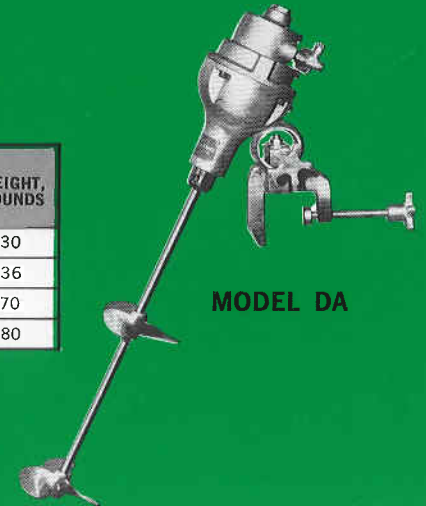
MODEL D



DIRECT DRIVE - AIR

MODEL	HP	DIMENSIONS, INCHES								H DUAL PROP. DIA.	WEIGHT, POUNDS
		A	B	C	D	E	F	G			
DA-13	1/3	6 1/2	12	35	36	3	3	5/8	4	30	
DA-11	1	6 1/2	12	46	48	3	3	5/8	6	36	
DA-2	2	6 1/2	16 1/2	58	60	3 3/4	3 3/4	7/8	6 1/2	70	
DA-4	4	6 1/2	18	58	60	3 3/4	3 3/4	7/8	7 1/2	80	

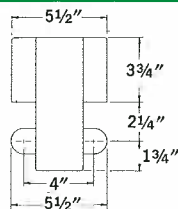
Dimensions are approximate. Certified dimensional prints furnished upon request.



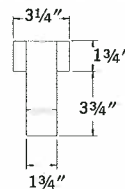
MODEL DA

SECTION a-a CLAMP FACE

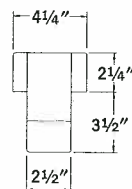
Dimensions,
Inches



AS FURNISHED FOR:
Model D - 1 through 5 hp.
DA-2
DA-4
Model G - 1/2 through 5 hp.
Model GA - 1, 2, & 4



AS FURNISHED FOR:
Model D - 1/4 and 1/3 hp.
Model DA - 1/3 and 1 hp.



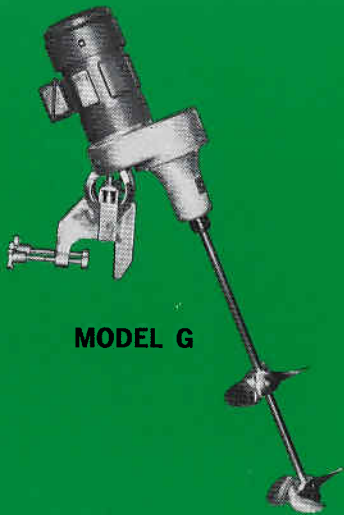
AS FURNISHED FOR:
Model G - 1/4 and 1/3 hp.
Model GA - 1/3 hp only.
Model D - 1/2 and 3/4 hp.

GEAR DRIVE. The mixer drive assembly components are factory aligned and tested, and shipped as a package for jobsite mounting. The drive assembly includes an electric or air motor with prelubricated ball bearings. The motor has a NEMA Style C footless mounting for direct connection to the gear reducer housing.

The single reduction gear reducer component consists of a factory grease-packed aluminum housing containing a pinion gear (mounted on the extended motor shaft) and a driven gear (mounted on a hollow quill output shaft). Mixer shaft output speed is 420 rpm. The gear reducer housing is machine-fitted to the lower quill-supporting housing.

The lower quill component consists of a cast aluminum housing containing widely spaced, prelubricated, double-sealed ball bearings to provide independent support of the hollow quill output shaft, which is subject to mixing stresses. The hollow chuck is assembled to the solid mixer shaft at the jobsite.

The swivel ball-and-socket mixer mounting arrangement attached to the gear reducer housing is designed to allow 360° rotation on the horizontal plane and 90° on the vertical plane so that proper positioning of the shaft and propellers can be achieved at the jobsite. A single or double (depending on hp) handwheel is provided for mounting the bronze clamp on the tank wall.

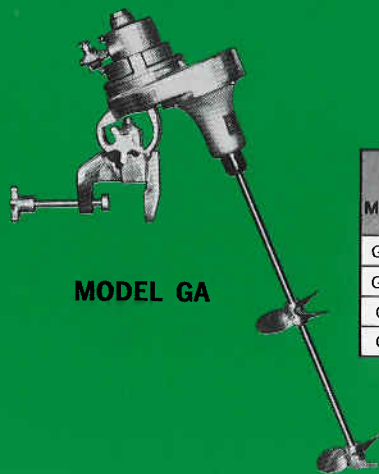
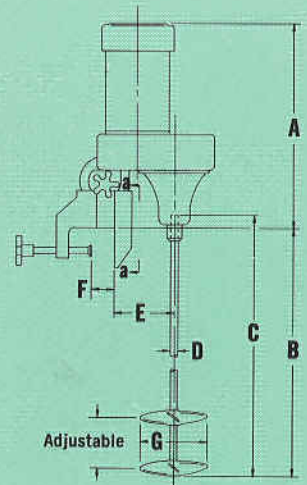


MODEL G

GEAR DRIVE – ELECTRIC

MODEL	HP	DIMENSIONS, INCHES						G DUAL PROP. DIA.	WEIGHT, POUNDS*
		A	B	C	D	E	F		
G-14	1/4	18	32	36	5/8	5 5/8	3 3/8	7	45
G-13	1/3	18	32	36	5/8	5 5/8	3 3/8	8	47
G-12	1/2	20	46	48	7/8	6 3/8	3 3/4	10	95
G-34	3/4	21	46	48	7/8	6 3/8	3 3/4	11	100
G-11	1	21	58	60	7/8	6 3/8	3 3/4	12	105
G-15	1 1/2	22	58	60	7/8	6 3/8	3 3/4	13	109
G-2	2	22	58	60	7/8	6 3/8	3 3/4	14	120
G-3	3	24	58	60	7/8	6 3/8	3 3/4	15	140
G-5	5	25	58	60	7/8	6 3/8	3 3/4	15	165

*Weight may vary with motor specifications.

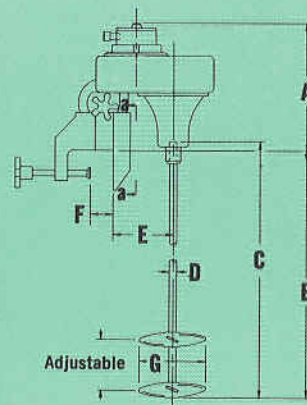


MODEL GA

GEAR DRIVE – AIR

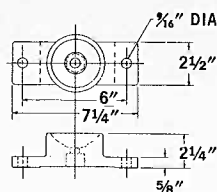
MODEL	HP	DIMENSIONS, INCHES						G DUAL PROP. DIA.	WEIGHT, POUNDS
		A	B	C	D	E	F		
GA-13	1/3	14	32	36	5/8	5 5/8	3 3/8	8	45
GA-11	1	16	56	60	7/8	6 3/8	3 3/4	12	80
GA-2	2	16 1/2	58	60	7/8	6 3/8	3 3/4	14	95
GA-4	4	18	58	60	7/8	6 3/8	3 3/4	15	105

Dimensions are approximate. Certified dimensional prints furnished upon request.

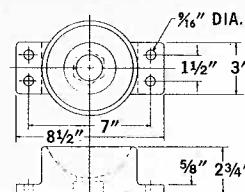


CUP BASE TO REPLACE CLAMP

Optional.
Dimensions
in Inches.



AS
FURNISHED
FOR:
Model D –
1/4 and 1/3 hp.
Model DA –
1/3 and 1 hp.



AS FURNISHED
FOR:
Model D –
1/2 through 5 hp.
DA-2
DA-4
Model G –
all units.
Model GA –
all units.

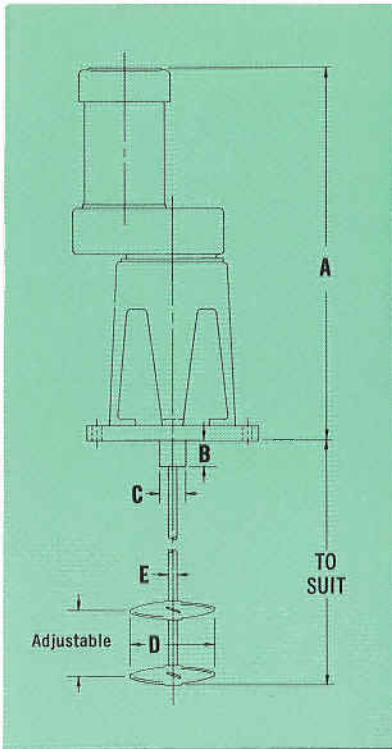


TOP ENTRY MIXERS

PROPELLER TYPE

FLANGE MOUNTED. These mixers mount permanently on flanges of pressure or vacuum tanks and are used for all viscosities. A conventional chemical pump stuffing box is provided for maintaining vacuum or pressure. A lantern

ring permits addition of lubricant or sealing fluid. These mixers are standard with forged steel flange, shaft and two propellers; also available with stainless steel flange facing, stuffing box, shaft and propellers.



GEAR DRIVE – FLANGE

420 R.P.M. — ALL UNITS

MODEL	HP	DIMENSIONS, INCHES					STD. FLANGE, 150# SERIES	WEIGHT, POUNDS
		A	B	C	D DUAL PROP. DIA.	E		
FG-14	1/4	22	2 1/4	2 1/2	7	5/8	5	69
FG-13	1/3	23	2 1/4	2 1/2	8	5/8	5	71
FG-12	1/2	28	3	3 1/4	10	1 1/4	8	150
FG-34	3/4	29	3	3 1/4	11	1 1/4	8	153
FG-11	1	29	3	3 1/4	12	1 1/4	8	160
FG-15	1 1/2	30	3	3 1/4	13	1 1/4	8	165
FG-2	2	30	3	3 1/4	14	1 1/4	8	172
FG-3	3	31	3	3 1/4	15	1 1/4	8	203
FG-5	5	32	3	3 1/4	15	1 1/4	8	215

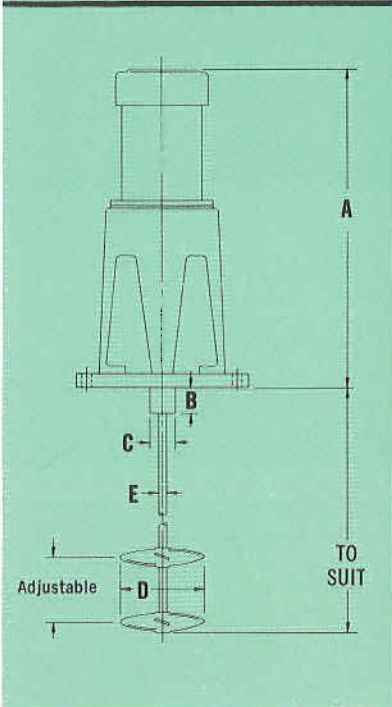
FIG. 762: Rated 150 psig @ 420 rpm. Seven rings of packing, a lantern ring for distribution of lubricant, and a packing gland for adjusting packing.

FIG. 763: Rated 25 psig @ 420 rpm. Two rings of packing and a packing gland for adjusting packing.

FIG. 855: Double mechanical seal, rated 450° F., 175 psi. Seal housing is tapped for inlet and outlet of lubricant. When higher pressures are encountered, it can be furnished with hydraulically balanced sealing faces.



MODEL FG



DIRECT DRIVE – FLANGE

1/4 THROUGH 3/4 H.P. — 1750 R.P.M.

1 THROUGH 5 H.P. — 1160 R.P.M.

MODEL	HP	DIMENSIONS, INCHES					STD. FLANGE, 150# SERIES	WEIGHT, POUNDS
		A	B	C	D DUAL PROP. DIA.	E		
FD-14	1/4	18	2 1/4	2 1/2	3 1/2	5/8	5	60
FD-13	1/3	19	2 1/4	2 1/2	4	5/8	5	63
FD-12	1/2	21	2 1/4	2 1/2	4 1/2	7/8	8	82
FD-34	3/4	21	2 1/4	2 1/2	5	7/8	8	85
FD-11	1	22	3	3 1/4	6	1 1/4	8	131
FD-15	1 1/2	22	3	3 1/4	6 1/2	1 1/4	8	158
FD-2	2	24	3	3 1/4	7	1 1/4	8	169
FD-3	3	26	3	3 1/4	7 1/2	1 1/4	8	205
FD-5	5	27	3	3 1/4	7 1/2	1 1/4	8	228

Available as Figure 762, 763 or 855. See descriptions above.

Dimensions are approximate.
Certified dimensional prints furnished upon request.

MODELS FG, FD, OG & OD ALSO AVAILABLE WITH AIR MOTORS.



MODEL FD

PLATE MOUNTED. These top entry mixers are for use on an open tank, where no stuffing box is required to maintain vacuum or pressure. They are identical in all respects to the flange-mounted mixers except that the flange is replaced by a rugged square aluminum plate with pre-

drilled bolt holes for easy mounting.

They may be bolted or clamped to any shop-made support above the tank, or installed on an angle bracket made by MIXMOR that assures correct position of the shaft and propellers in the tank.

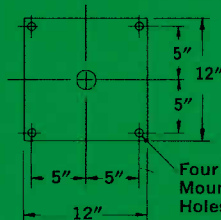
GEAR DRIVE - PLATE

420 R.P.M. — ALL UNITS

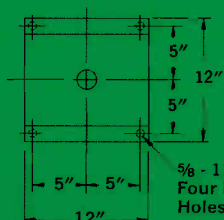
MODEL OG

MODEL	HP	DIMENSIONS, INCHES			WEIGHT, POUNDS
		C	D	E DUAL PROP. DIA.	
OG-14	1/4	22	5/8	7	60
OG-13	1/3	23	5/8	8	63
OG-12	1/2	28	1 1/4	10	119
OG-34	3/4	29	1 1/4	11	121
OG-11	1	29	1 1/4	12	129
OG-15	1 1/2	30	1 1/4	13	134
OG-2	2	30	1 1/4	14	141
OG-3	3	31	1 1/4	15	172
OG-5	5	32	1 1/4	15	184

CHOICE OF MOUNTING FOR MODELS OG AND OD (REFER TO MODEL OG DRAWING FOR LOCATION)



SECTION A-A FLAT PLATE



SECTION B-B ANGLE RISER

Four 7/8 In. Mounting Holes

5/8 - 11 Tap Four Mounting Holes

DIRECT DRIVE - PLATE

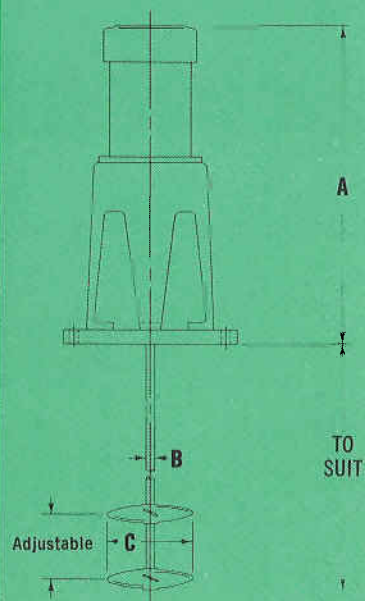
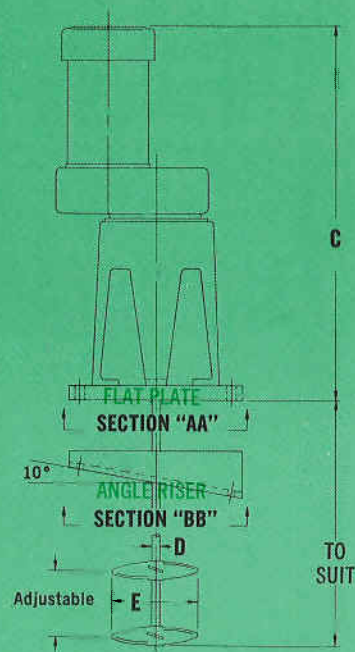
1/4 THROUGH 3/4 H.P. — 1750 R.P.M.

1 THROUGH 5 H.P. — 1160 R.P.M.

Dimensions are approximate. Certified dimensional prints furnished upon request.

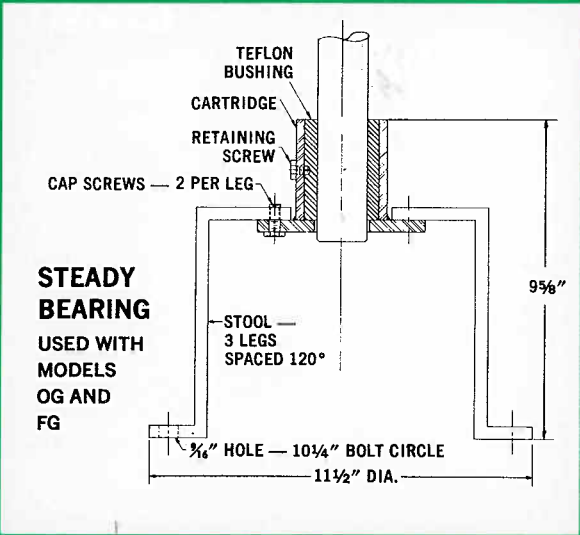
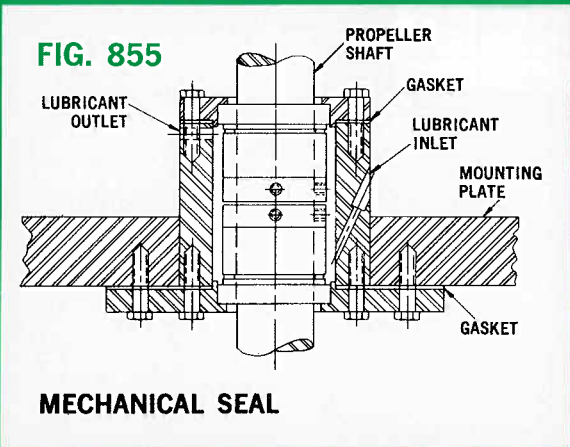
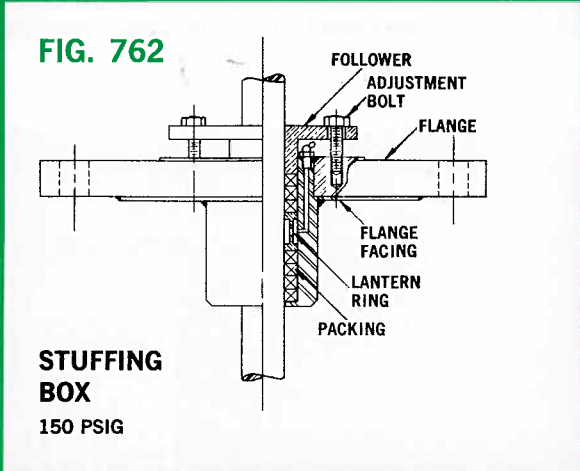
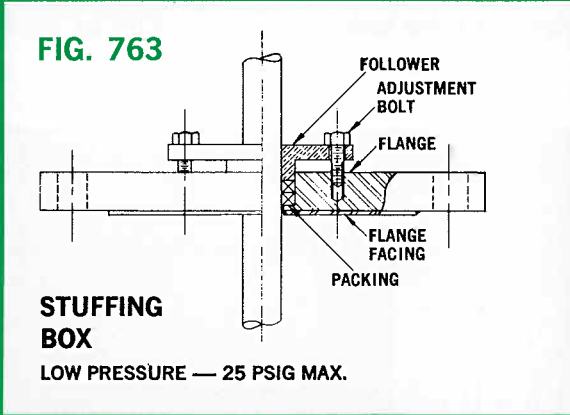
MODEL OD

MODEL	HP	DIMENSIONS, INCHES			WEIGHT, POUNDS
		A	B	C DUAL PROP. DIA.	
OD-14	1/4	18	5/8	3 1/2	53
OD-13	1/3	19	5/8	4	55
OD-12	1/2	21	7/8	4 1/2	63
OD-34	3/4	21	7/8	5	66
OD-11	1	22	1 1/4	6	100
OD-15	1 1/2	22	1 1/4	6 1/2	137
OD-2	2	24	1 1/4	7	148
OD-3	3	26	1 1/4	7 1/2	184
OD-5	5	27	1 1/4	7 1/2	207





SHAFT SEALS AND STEADY BEARING
 SHAFT SEALS AND STEADY BEARING



MixMor manufactures and stocks stuffing boxes, mechanical seals and steady bearings to suit all applications of MixMor top-entry mixers.

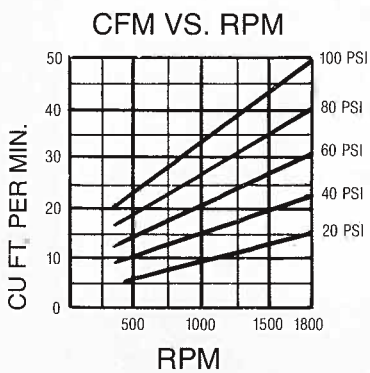
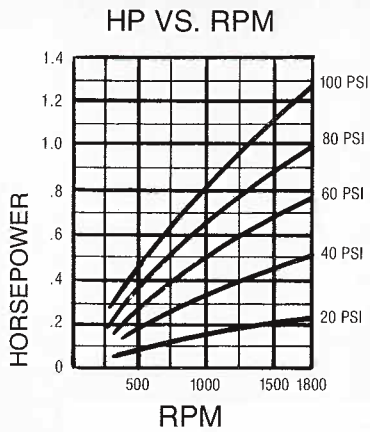


Permanently installed on yard storage vessels, these Model FG MixMor units agitate liquid latex to assure uniform consistency as it is drawn off for production.

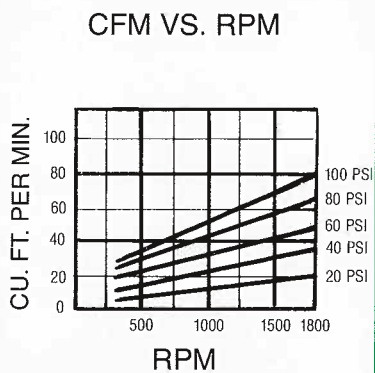
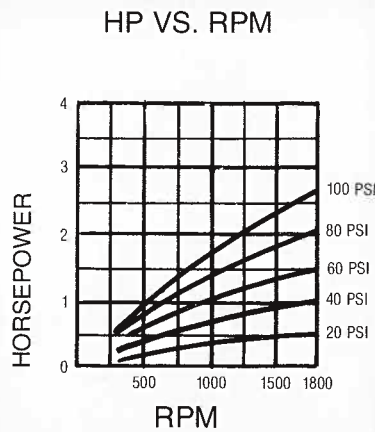
AIR MOTOR SPEED, H.P. AND AIR CONSUMPTION

Air motors have the advantages of infinitely variable speed, obtained by varying the air pressure, and extremely light weight. They are entirely safe for use in hazardous areas.

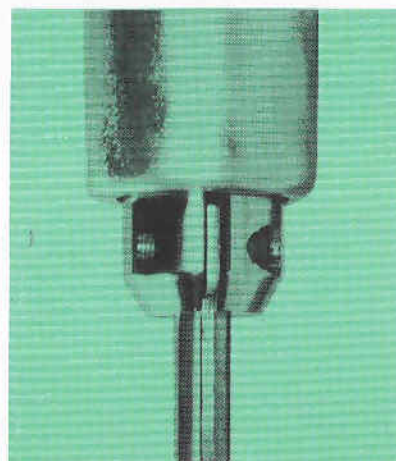
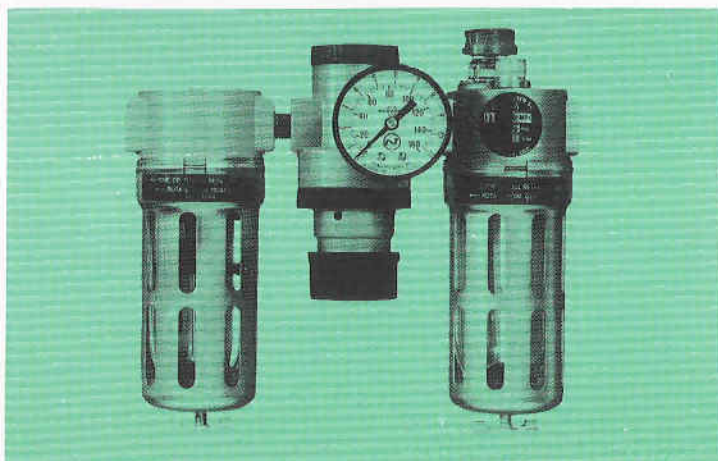
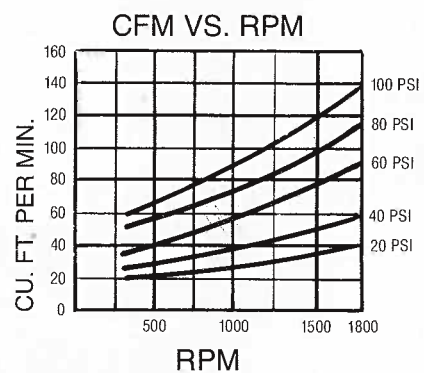
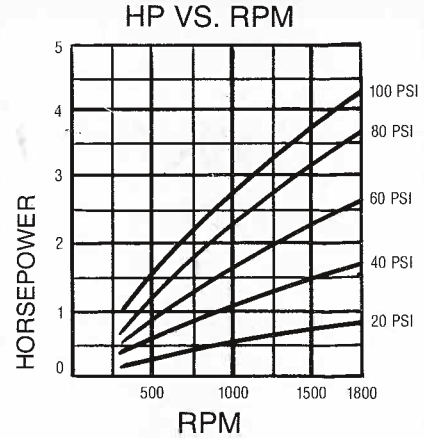
1/3 AND 1 HP



2 HP



4 HP



A FILTER, A LUBRICATOR AND A PRESSURE REGULATOR, (left) all available from MIXMOR, are necessary equipment on the air inlet line.

THE MIXER CHUCK (right) is a hollow type, split at the bottom and fitted with a socket head cap screw and a key. The mixer shaft may be

inserted into the chuck as deep as six inches, providing lengthwise shaft adjustment of about four inches. Tightening the cap screw grips the shaft tightly, and the key keeps it from turning in the chuck. This is a distinctive feature of all MIXMOR portables. NO OTHER PORTABLE MIXER HAS THIS LOCKING PRINCIPLE.



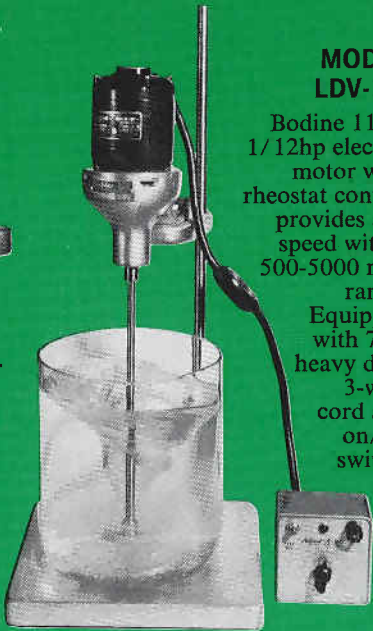
LABORATORY MIXERS

GUARANTEED TO DO YOUR JOB OR YOUR MONEY BACK



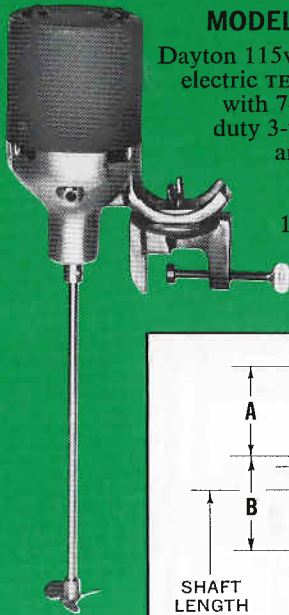
MODEL LDA-60.

Gast 1/6hp air motor with needle valve control for infinite adjustment of speed within 100-6000 rpm range.



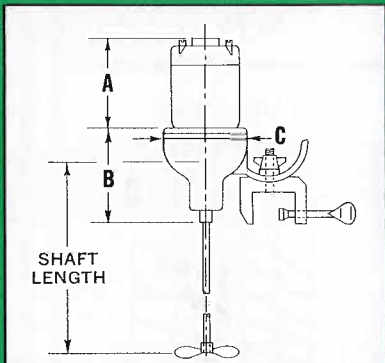
MODEL LDV-12.

Bodine 115v. 1/12hp electric motor with rheostat control provides any speed within 500-5000 rpm range. Equipped with 7-ft. heavy duty 3-wire cord and on/off switch.



MODEL LD-20.

Dayton 115v. 1/20hp electric TEFC motor with 7-ft. heavy duty 3-wire cord and on/off switch. Constant 1600 rpm.

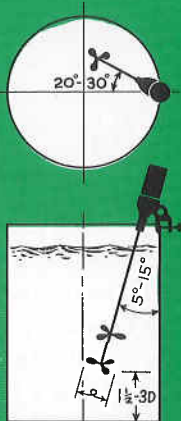


MODEL	DIMENSIONS, IN.			WEIGHT, POUNDS
	A	B	C	
LDA-60	3	4	4 1/4	4
LDV-12	4	4	4 1/4	4
LD-20	4	4	4 1/4	4

All three models may be specified with either a tank clamp or a ring stand clamp. The latter mounts on a MixMOR stand having a 1/2-in. diameter x 24-in. long steel column and a 10 x 10 x 3/4-in. aluminum base. Tank clamps are made of bronze with a maximum opening of 1 1/2 in.

Propellers are three-blade, 2-in. diameter, made of 316 stainless steel. Mixer shafts are 5/16-in. diameter, 12-in. long, also made of 316 stainless.

POSITIONING TIPS



PORTABLES

Extensive research has proved that improper positioning greatly reduces the efficiency of a propeller-type mixer and, in certain cases, causes undesirable mixing action. To utilize energy supplied by the mixer, a top-to-bottom turnover of the liquid should be created. To accomplish this the bottom propeller should be located above the tank floor a distance of 1 1/2 to 3 times the propeller diameter. The top propeller should be at least 24 inches below the surface of the liquid.

The mixer shaft should be angled 5 to 15° off the vertical wall of the tank, and pointed 20 to 30° RIGHT of the tank centerline. The propeller should never extend beyond the bisecting centerline.

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

The mixer may be clamped directly to the rim of the tank or mounted on a separate support. When clamping to the tank, protect it by placing a wood block under the clamp screws. If tank mounting is to be permanent, consider welding a short piece of channel to the tank to serve as a clamp pad.

MixMOR PROPELLER DATA

MixMOR propellers are square pitch, three-blade, sized to suit the user's application, and statically balanced for vibration-free operation. The propellers are modified marine type with thicknesses increased to give longer life in abrasive materials. On portable and top entry units they are easily adjusted to any position on the shaft by means of a setscrew.

Proper propeller sizing and positioning are of critical importance in obtaining efficient mixing because they directly affect the power consumption, product quality and volume moved. MixMOR and their representatives offer free engineering service to customers on these and all other aspects of mixing technology.

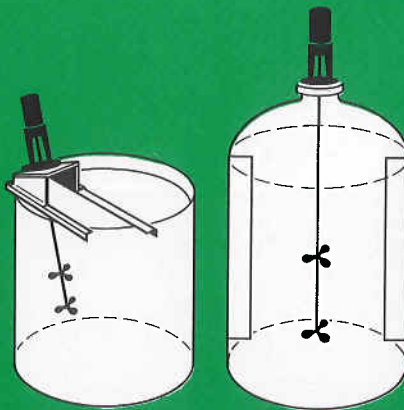


Castings are high quality. Standard materials are steel and stainless steel. Other materials available.

Propellers equipped with stabilizing rings are for centering long overhung shafts.

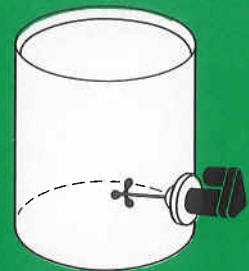
TOP ENTRY

Top entry units in non-baffle tanks should be positioned so that the shaft is 10° off the vertical wall. A MixMOR angle bracket is available for holding plate-mounted mixers in this position. For flange mounted mixers, the flanged tank port must be made (or modified) to provide these angles for the shaft. The bottom propeller should be set above the tank floor a distance equal to 1½ to 3 times the diameter of the propeller. Certified installation drawing will be furnished upon request.



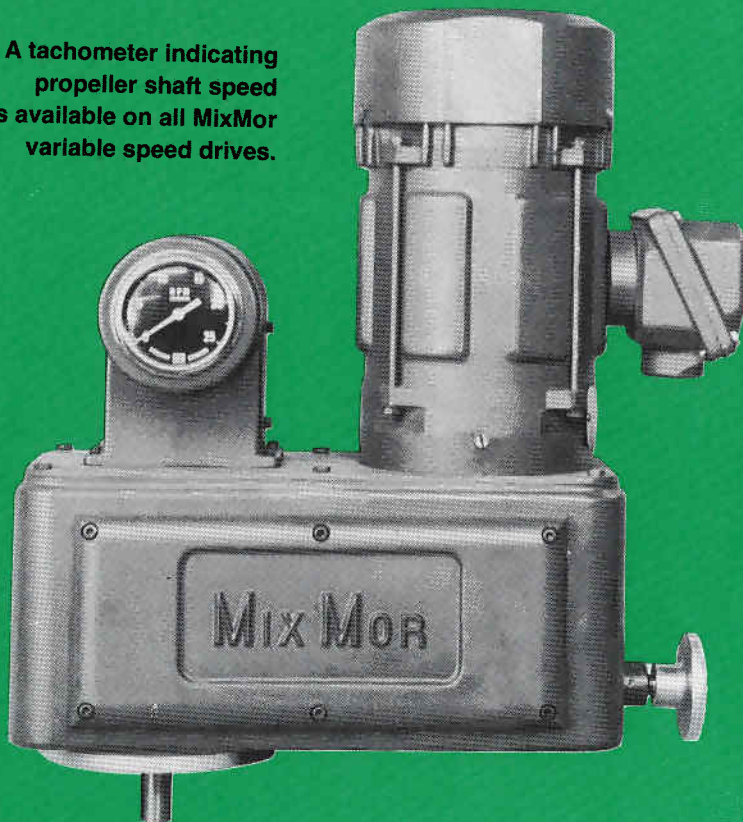
SIDE ENTRY

Side entry mixers require a flanged tank port that will position the shaft horizontally and 8° to LEFT of tank centerline. Propeller tips should clear the tank bottom by 6 to 12 inches. The above are general recommendations only. Specific instructions are furnished for each installation.



MIXMOR VARIABLE SPEED DRIVE

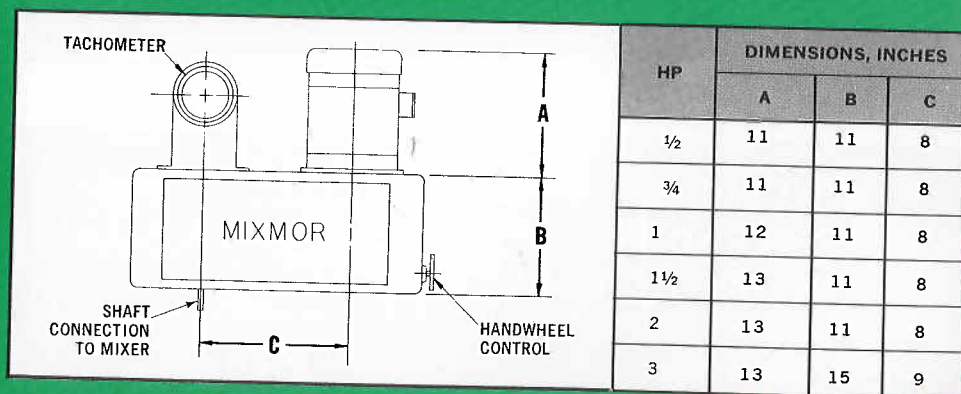
A tachometer indicating propeller shaft speed is available on all MixMor variable speed drives.



INFINITE SPEED CONTROL

MIXMOR electric portables and top entry units are now available with a built-in mechanical variable speed drive that provides an infinite range of speed settings within the capacity of its paired adjustable pulleys. Standard units have speed ranges of 105 through 420 rpm or 450 through 1800 although other speeds are available.

Speed setting is changed by turning a convenient handwheel. Torque is constant, and no lubrication of the variable speed unit is ever required. The unit may be ordered factory-installed on MixMOR portable or top-entry mixers utilizing electric motors ranging from 1/2 through 3hp.



WHERE TO USE THEM. Because of their constant torque, broad range of speeds and infinite speed settings, MixMOR variable speed drives are ideal for pilot plant studies. They are also extremely useful for controlling aeration in batches, working with variable liquid levels, and operating with a wide range of viscosities.

ACCUMIX™ Variable Speed Control

When Accuracy Dictates...

The Accumix SCR Variable Speed Control converts AC to DC to run the DC motor and allows the mixer to be accurately set at the optimum speed for changing process conditions. It can be added to all MixMor Portable and Fixed Mounted-Top Entering mixers up to 2hp and is well suited for applications such as:

- Fluctuating Batch Sizes
- Air Entrainment Control
- Changing Retention Time
- Varying Product Viscosity
- Reactors
- Flocculation
- Pilot Plant Work
- Formulation

Accumix Drive Features

- NEMA 4 Enclosure Keeps Out Moisture and Dust
- Operates on 115 to 230 VAC, 50/60 Hz, 1 Phase
- Surge Protection and Full Wave SCR
- 20:1 Speed Range and Soft Start
- Minimum and Maximum Speed Adjustment
- Power Indicator Light
- Fused Overload protection
- UL Recognized and CSA Certified

Packaged Drive

The Accumix control can be furnished separate or assembled to the motor and wired with an 8' cord and plug for immediate service. The packaged drive is ideal when a portable mixer is moved from one tank to another.



*Shown with
Portable Mixer*

*Accumix Variable
Speed Control*



MixMOR



USDA ACCEPTED Portable Mixers

MixMor currently carries 26 USDA Accepted Portable Mixers for applications within the *food, dairy, pharmaceutical* and other *industries* that require sanitary features.

Incorporated into the MixMor design is the highest quality of stainless steel and electroless nickel finishes ensuring that MixMor mixers comply with the most stringent USDA government requirements.

MixMor mixers can be designed with any combination of the features listed and other features to meet your individual requirements.

MixMor®

Standard Features

- Nickel Plated Air Motors
- Paint-Free Washdown Duty Electric Motors
- Stainless Steel Clamp Assemblies
- Food grade Lubricants
- Stainless Steel Fasteners
- Crevice-Free Housings
- Stainless Steel Quill Shafts
- Sanitary Finish on Shafts & Impellers
- Impellers Welded to Shafts

