



NEW EQUIPMENT WARRANTY

We warrant that this equipment from U.S. Stoneware Corporation is within stated specifications and is free from defects in materials and workmanship.

Our obligation under this warranty is limited to repairing or replacing F.O.B. our factory and defective parts in this product that to our satisfaction existed at time of shipment, provided the purchaser gives us written notice immediately upon discovery thereof, or in any event within one year from time of shipment.

Our warranty does not cover work or replacement of parts made necessary by carelessness, misuse, accident or by incidents which occur outside of use of the instrument such as water damage, lightning, etc. U.S. Stoneware's liability under this warranty shall not exceed the cost of correcting defects whether it is the correction of the defects or the replacement of the product. Claims based on any defect must be made in writing within 30 days of the purchaser's becoming aware of that defect for this warranty to apply. U.S. Stoneware assumes no liability for consequential or special damages in connection with this contract.

U.S. Stoneware shall have no liability for damages of any kind arising from the installation and / or use of this equipment by anyone. The purchaser, by the acceptance of this equipment, will assume all liability for any damages which may result from its use or misuse.

This is our sole warranty with respect to this equipment. We make no other warranty of any kind whatever, express or implies, and all implied warranties of merchantability and fitness for a particular purpose which exceeds the above obligations are hereby disclaimed by U.S. Stoneware Corporation.



**INSTRUCTIONS FOR INSTALLATION,
OPERATION AND MAINTENANCE OF
801 SERIES JAR MILLS**

INSTALLATION:

- * After placing machine in the desired location, position it so that the rolls are level. (Leveling feet are provided for this purpose)
- * Line cords are furnished for 115 or 230 volt, single phase AC power supply. (Machine controls are compatible for 50 or 60 Hz. operation)
- * On/Off rocker switch is located on the line cord and a toggle switch is on the controller.
Note: Proper rotation should be such that the top of the drive roller turns toward the jar being turned. (CW rotation when viewed from drive end of roller)

OPERATION:

- * Refer to the enclosed chart to adjust the idle roller to the size of jar being used.
- * To adjust the idle rollers, remove the wing nuts, etc. from the underside of the securing bolts and move the roller to desired location. Replace the bolts, wing nuts, etc.
- * Roller speed is controlled by the speed pot on the control box.

LUBRICATION:

- * The motor and bearings are lubricated for life.
- * Speed reducer – Oil changes are not required. Oil should only be replaced when maintenance is preformed that requires disassembly.
If the oil is replaced, use Mobil SHC634.
- * Roller Chain - lubricate bi-weekly with an SAE #30 weight oil.
Note: New chains will loosen up slightly as the joints seat themselves causing initial elongation which is many times greater than the elongation during the balance of chain life. A tensioner is located on the upper tier chains to keep the chain taut as it may slacken. To adjust the tension on these chains, loosen the set screw on the tensioner arm, rotate the assembly further into the chain, and re-tighten the set screw. To adjust the tension of the chain from the reducer to the first tier, loosen the four jam nuts on the underside of the machine, evenly tighten the four cap screws located at the corners of the drive mounting plate, then re-tighten the jam nuts on the bottom of the machine.

REPLACEMENT PARTS:

- * Parts can be identified by referring to the assembly drawing / bill of material. Please furnish part number, part name, and serial number of the machine when ordering replacement parts

Thank You For Purchasing A Quality U.S. Stoneware Product!

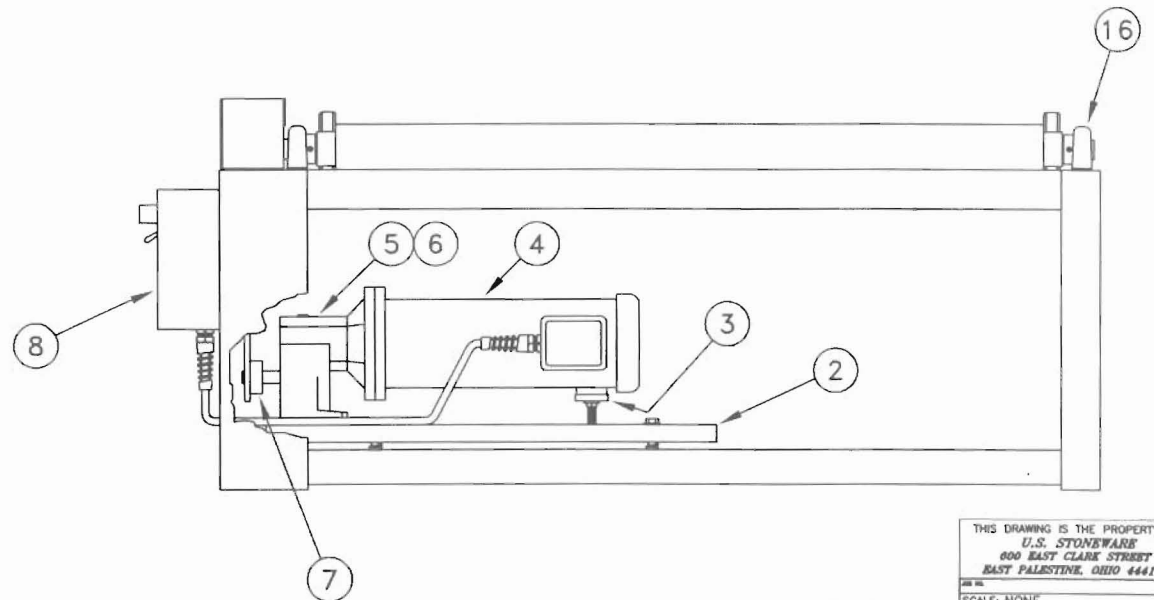
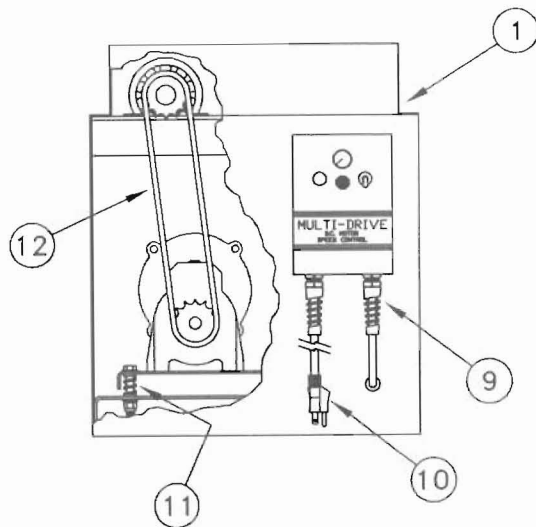
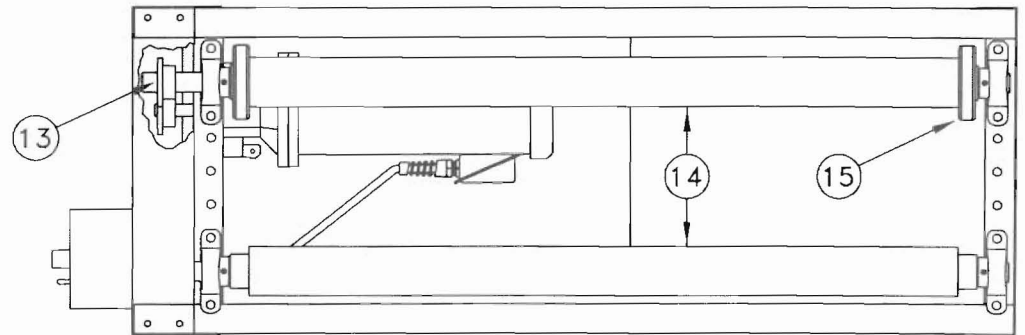
BILL OF MATERIAL FOR: M93801CVM

DATE: 01/24/2002

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	P90503	MACHINE BASE
2	1	P90421	MOTOR MOUNT PLATE
3	1	P05401	LEVELER
4	1	EL0035	MOTOR - 1/2 HP - 90V DC.
5	1	P07821DC	REDUCER - 5:1
6	1	P08147	MOUNTING FEET FOR REDUCER
7	1	P08103	SPROCKET - 40B14 X 5/8
8	1	EL0038	CONTROL
9	3	P06441-P	STRAIN RELIEF
10	1	P26314	LINE CORD - 115/60/1
11	4	P32436	SPRING
12	36	P06212	#40 ROLLER CHAIN
13	1	P06136	SPROCKET - 40B14 X 1
14	2	P07345	DRIVE / IDLE ROLL - 2 1/2 X 36
15	2	P06706	JAR STOP BEARING
16	4	P06603	PILLOW BLOCK - 1"

VOLTAGE REQUIREMENTS: 115/60-50/1

ROLLER R.P.M.: 50 - 300



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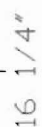
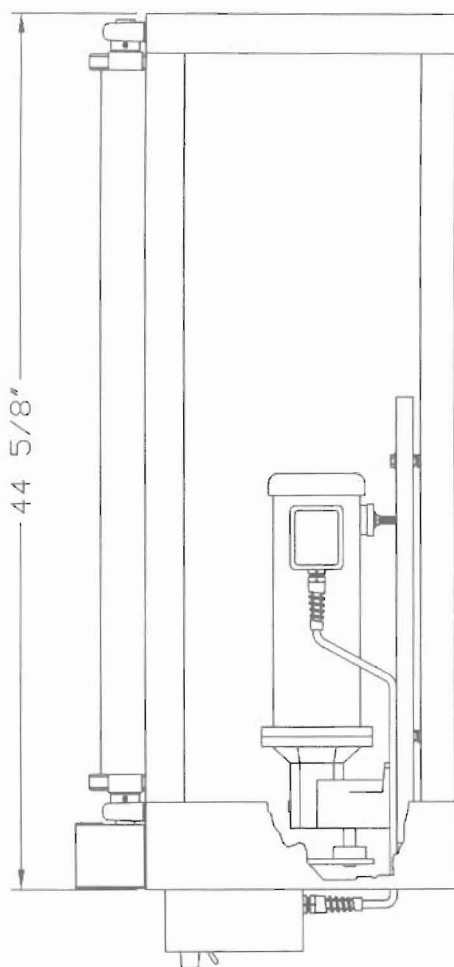
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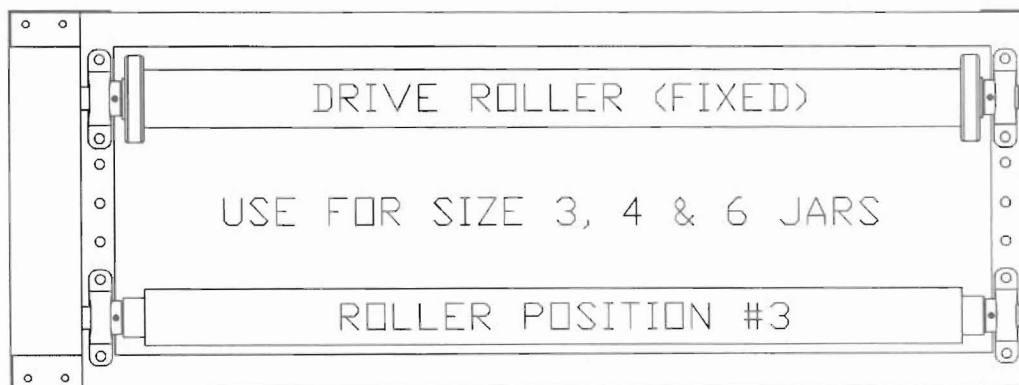
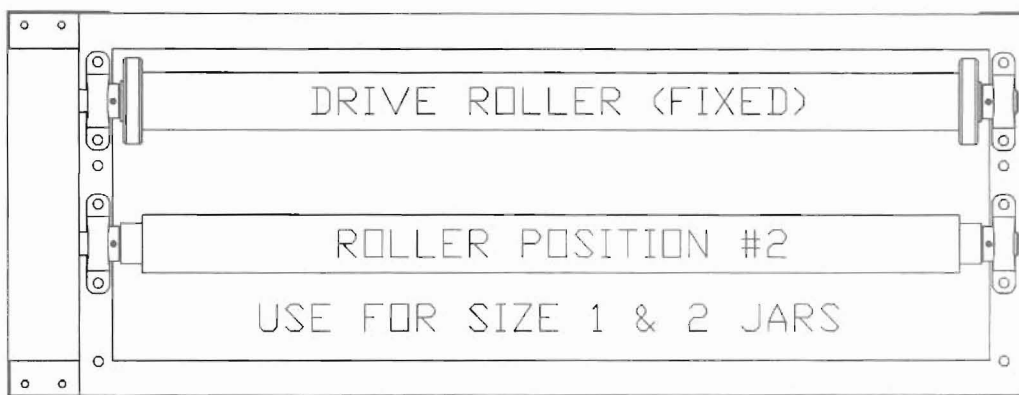
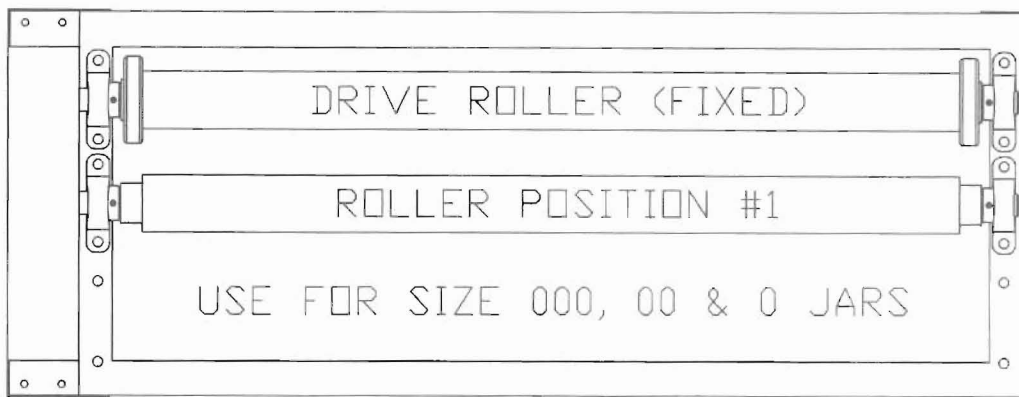
GENERAL ASSEMBLY AND PART ID
FOR 801 CVM JAR MILL
115 VOLT

DATE: 01/24/02
DRAWN BY: XXXX
CHECKED BY: XXXX
PTID801CVM115

MANUFACTURING STANDARDS
ALL UNLESS TO CONFORM TO AMS D11-LATEST REVISION
UNTOLERANCED FABRICATED DIMENSIONS
X = +.005
XX = +.010
XXX = +.020
FRACTIONS = +1/32
ANGLES = +1/2

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**Recommended Jar / Roller Speeds
For Optimum Grinding Efficiency
(65% of Nc)**

Jar Model & Size	Jar I.D.	Jar Speed @ 65% Nc	Roll Speed (700 Series)	Roll Speed (800 Series)
774 – 000	2.625	106.46	180	144
774 – 00	5.0	77.14	222	177
774 – 0	5.25	75.28	235	188
774 – 1	8.0	60.98	274	220
774 – 2	10.0	54.54	300	240
774 – 3	12.0	49.79	N/A	259
774 – 4	14.0	46.10	N/A	277
774 – 6	14.0	46.10	N/A	277
773 – 00	5.25	75.28	240	192
773 – 1	8.0	60.98	288	230
773 – 3	11.375	51.14	N/A	266
611 – 00	5.64	72.63	218	174
611 – 0	5.64	72.63	218	174
611 – 1	7.64	62.39	250	200
611 – 2	9.64	55.56	278	222
611 – 3	9.64	55.56	278	222
611 – 4	11.64	50.56	N/A	243
611 – 6	13.64	46.70	N/A	262
612 – 00	5.594	72.92	229	183
612 – 0	5.594	72.92	229	183
612 – 1	7.594	62.59	261	209
612 – 2	9.594	55.69	284	227

774 – Roalox

773 – High Alumina

611 – Stainless Steel

612 – Rubber Lined Carbon Steel Jar



**Approximate Roller Speed Settings
For 800 Series Jar Mills**

<i>Dial Position</i>	<i>R.P.M.</i>
0	50
5	60
10	74
15	85
20	99
25	112
30	125
35	136
40	150
45	163
50	175
55	187
60	200
65	213
70	225
75	237
80	249
85	262
90	274
95	288
100	300



Replacing Brushes in D.C. Motors

- 1.) Locate, and remove the two plastic caps near the rear of the motor. (2 screws each)

Note: Depending on model, the motor may have to be removed for accessibility.

- 2.) Slowly remove the plastic screws found under caps. (1 each side) Screws are under a slight spring tension, take caution as to not lose small parts.
- 3.) Remove brushes and replace with a new set.
- 4.) Carefully replace screws, do not over tighten.
- 5.) Replace caps and re-secure with screws.

Worn out brushes will cause the motor to loose power, run intermittently and cause damage to the armature.

Brushes should be checked periodically for wear. (Minimum of twice a year)

OPERATING AND MAINTENANCE INSTRUCTIONS PERMANENT MAGNET FIELD D.C. MOTORS

IMPORTANT SAFETY INFORMATION

- 1.- Before making electrical power connections, check for proper grounding of the motor. This can be accomplished by using a separate ground wire connection to the bare metal of the motor frame, or other suitable means. Follow all local electrical and safety codes as well as the National Electric Code (NEC) and the Occupational Safety and Health Act (OSHA).
- 2.- Always disconnect the power source before working on or near a motor or its connected load. If the power disconnect point is out of sight, lock it in the open position and tag it to prevent unexpected application of power.
- 3.- Be careful when touching the exterior of an operating motor. Normal operating temperature may be hot enough to be painful or cause injury. This condition is not unusual since modern motors usually run at high temperatures.
- 4.- When cleaning electrical or electronic equipment, always use approved non-explosive and non-flammable cleaning solvent. Do not attempt to clean the motor while electrical power is connected to it.
- 5.- These motors are not intended for instant reverse applications at full load voltage. PM motors can be dynamically braked and reversed at some low armature voltage (10%) but should not be plugged reverse with full armature voltage.
- 6.- All electrical contacts and connections must be properly insulated and enclosed. Couplings, belts, chains and other mounted devices must be in proper alignment, balanced, guarded and secure to insure safe motor operation.
- 7.- Protect the power cables from coming in contact with sharp objects.
- 8.- Shock loads should be avoided. Care should be taken when connecting a load to the shaft to avoid excessive tension when either belt or chain drive is used.

INSTALLATION INSTRUCTIONS.

- 1.- Mount the motor to a flat rigid surface. Preferably metal using 5/16" bolts.
 - 2.- Check that the armature is free to rotate and that there are no rubbing parts. A slight magnetic cogging effect will be perceptible. This is normal and should not be of concern.
 - 3.- The ambient temperature should be between 0 and 40C. For adequate ventilation, the motor should be located so that free air circulation is possible and there is no obstruction to the fan inlet. motor must be protected from the weather if installed outdoors.
- ⚠ **CAUTION:** Do not install in an explosive atmosphere.
- 4.- Wiring connections: First determine the direction of rotation of shaft by connecting the power supply to the unit. Note the direction of rotation in relationship to the power lead. If it is necessary to reverse the direction of rotation for your installation, simply disconnect the power source and reverse the leads. Then proceed with electrical connection.

OPERATION

Consult nameplate for rating and model number. Values are for full load conditions. Observe the following cautions:

- 1.- Permanent magnet field DC motors may be operated continuously without damage as long as nameplate amps are not exceeded.
- 2.- Starting and accelerating torques of permanent magnets DC motors are considerably higher than the full load torque of the motor. Care should be taken to prevent damage to the driven mechanism as a result of the higher starting and accelerating torques.
- 3.- Check for unusual vibration or noises that might indicate rubbing or interference. The most likely cause of vibration in new machines is misalignment due to improper installation, loose foot bolts, and uneven shimming under feet. Current ripple due to a rectified power supply may also be a source of vibration and audible noise.

MAINTENANCE INSTRUCTIONS

CAUTION: When disassembling for maintenance, use clean bench free of steel parts or chips. The permanent magnet field will attract loose parts into the motor.

BRUSHES: Motor brushes require periodic inspection and replacement as wear indicates. Different applications result in different rates of wear on the brushes. A 500 hour interval is recommended for inspection of the brushes until wear rate is established. Experience will indicate the proper interval for inspection. Examine the brushes to see they are not cracked, broken or excessively worn. Replacement brushes should be installed before old brushes wear out to 9/16" long, measured on the long side. After replacing brushes run the motor near rated speed for at least 1/2 hour with no load to seat the new brushes. Failure to properly seat new brushes may cause commutator damage and rapid wear of the new brushes.

WARNING: The presence of silicone in DC motors will cause rapid brush wear. Sources of silicone include oils, RTV compounds, mold release agents, and some insulating varnishes. These silicone substances must be avoided to insure proper DC motor performance.

COMMUTATOR: If the commutator becomes rough, scored, or out of round, a MagneTek authorized service center should disassemble the motor and resurface the commutator. With every third brush change the commutator should be resurfaced and the carbon dust blown out of the motor windings. **CAUTION:** Do not use any solvent or lubricant on the commutator.

BEARINGS: Bearings are lubricated for life. Shielded or sealed bearings may be used depending on the application and do not require the addition of oil or grease during routine maintenance. Under proper conditions bearings will give over 20,000 hours of service.

For replacement parts contact your local A.O.SMITH distributor. For the name of the A.O.SMITH distributor in your area call 1-800-672-6495

A.O.SMITH

9615 Plaza Circle RD. c/o Panamerican Center for Industry
El Paso, Tx 79927 (915) 780-5800 FAX (915) 780-5811 BOK-160



BALDOR ELECTRIC COMPANY

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RATIO MULTIPLIER INSTALLATION, LUBRICATION AND OPERATION INSTRUCTION

These instructions must be read thoroughly before installing or operating speed reducers. File instructions for future reference.

CAUTION

- For safe operation of any gear drive, all rotating shafts and auxiliary components must be shielded to conform with applicable safety standards. You must consider overall operational system safety at all times.
- When using a speed reducer to raise or lower a load, such as in hoisting applications, provision must be made for external braking. Under no conditions should a speed reducer be considered self-locking.
- Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

GENERAL INSTRUCTIONS

Align all shafts accurately. Improper alignment can result in failure. Use of flexible coupling is recommended to compensate for slight misalignment.

Auxiliary drive components (such as sprockets, gears and pulleys) should be mounted on the shafts as close as possible to the housing to minimize effects of overhung loads. Avoid force fits that might damage bearings or gears.

Gear drives are nameplated for 1750 RPM Input Speed and Class I Service. For lower Input Speeds and other Service Classes, consult the factory.

INSTALLATION

Baldor Ratio Multipliers are ready for installation as removed from the carton. Each Ratio Multiplier has been filled with Klubersynth GH6-460 synthetic lubricant at the factory. The oil quality is sufficient for any mounting position. The motor shaft coupling has been prelubricated with Kluber Q NB 50 antiseize.

MOUNTING POSITION

For maximum seal life, the Ratio Multiplier should be mounted with the input shaft as high as possible. ***Mounting the Ratio Multiplier with the input seal vertically down is not recommended.*** If a vertically down input shaft position is required, consult the factory.

LUBRICATION

Oil changes are not required. Oil should only be replaced when maintenance is performed that requires disassembly. If the oil is replaced, use Klubersynth GH6-460. This Lubrication is suitable for a wide temperature range (-31°F to 320°F). However refer to "Operating Environment" section for ambient operating temperature for Baldor ratio multipliers.

(Oil capacity in fluid ounces ***RM1 6.2 oz., RM2 11 oz.***)

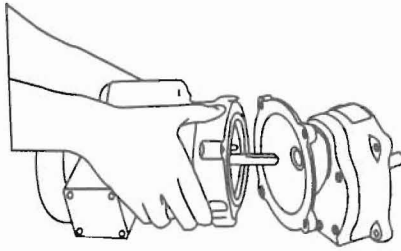
Satisfactory performance may be obtained with non-synthetic oils and will require more frequent changes.

OPERATING ENVIRONMENT

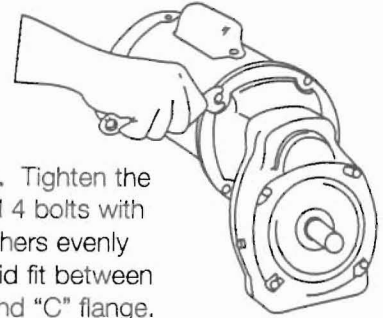
Baldor Ratio Multipliers are designed to operate in ambient temperatures of -10°F to 100°F. The oil sump temperatures of the Ratio Multiplier must not exceed 200°F. Consult the factory for applications requiring ambient operating temperature outside this range.

"C" FLANGE – HOLLOW BORE WORM STYLE:

STEP #1. Remove bore plug. Position key in Ratio Multiplier Input Bore. Line up the key with the keyslot and slip the motor shaft into the Ratio Multiplier Input Bore.



STEP 2. Tighten the supplied 4 bolts with lockwashers evenly for a solid fit between motor and "C" flange.



EXTENDED "C" FLANGE WITH FLEXIBLE COUPLING STYLE:

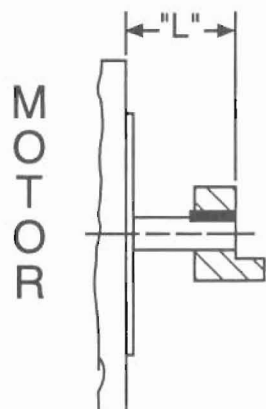
STEP #1: Mount one coupling half on motor shaft so that the coupling half and end of key are flush with end of motor shaft. (See Drawing A)

STEP #2: Tighten coupling setscrews. Thread locking compound is recommended on all coupling setscrews. Measure distance from inner face of coupling to motor mounting surface. (See Drawing A)

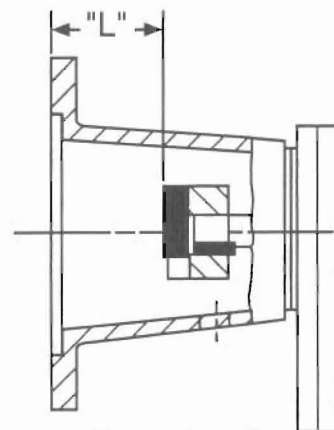
STEP #3: Mount other coupling half on the reducer input shaft so the coupling end measures the same distance to the mounting surface of the "C" flange. (See Drawing B) Tighten setscrews. Key should be flush with shaft end. Use pipe plug opening in side of "C" flange to loosen, tighten or make any adjustments in coupling position.

STEP #4: Align coupling halves and install motor.

STEP #5: Rotate motor to required position and tighten the supplied four bolts and lockwashers evenly for a solid fit between motor and "C" flange. Re-install and tighten the pipe plug in the flange access hole.



Drawing A



Drawing B