## Operating and Maintenance Instructions Essick Mini-Sprayer

### **Safety**

- 1. DO NOT OPERATE OR SERVICETHIS EQUIPMENT BEFORE READING AND UNDERSTANDING THE OPERATING AND MAINTENANCE INSTRUCTION MANUAL.
- 2. DO NOT OPERATETHIS EQUIPMENT UNLESS ALL GUARDS AND SAFETY DEVICES ARE ATTACHED AND IN PLACE.
- 3. STOP MOTOR AND UNPLUG POWER CORDWHEN LEAVING EQUIPMENT.
- 4. BLOCK UNIT WHEN PARKING ON A SLOPE.
- 5. MAINTAINTHIS EQUIPMENT IN SAFE OPERATING CONDITION AT ALL TIMES.
- CAUTION MUST BE EXERCISED WHILE SERVICING THIS EQUIPMENT. ROTATING AND MOVING PARTS CAN CAUSE INJURY IF CONTACTED.
- 7. KEEP ALL INEXPERIENCED AND UNAUTHORIZED PEOPLE AWAY FROM EQUIPMENT AT ALL TIMES.
- 8. UNAUTHORIZED EQUIPMENT MODIFICATIONS WILL VOID ALL WARRANTIES.
- OPEN ALL VALVESTO RELIEVE BACK PRESSURE BEFORE DISCONNECTING NOZZLE OR HOSES.
- 10. STOP MOTOR AND UNPLUG POWER CORD BEFORE PUTTING HANDS IN HOPPER. NEVER PUT HANDS IN HOPPER WHILE MACHINE IS IN OPERATION.
- 11. WEAR SAFETY EYE GLASSES AT ALL TIMES WHEN WORKING AROUND MACHINE OR MATERIAL LINES.
- 12. DO NOT BREAK OR DAMAGETHE BLADE ON 110V FLANGED INLET PLUG.

### **Operating Instructions**

- Check to see that the on/off switch located on the electrical box (on the front of the machine) is in the OFF position (pushed down) and the red on/off switch located directly below the nozzle assembly is also in the OFF position (pushed in).
- 2. Turn on the air compressor switch located on the control box (on the front of the machine).
- Fill hopper with at least five gallons of clean water and liquid dishwashing soap. Turn the pump on and pump the water and dishwashing soap through the complete system. Stop pump when water level reaches within approximately two inches from the bottom of the hopper.
  - NOTE: **Do not use** any automatic dishwasher soap, powdered soap, motor oil, WD 40 or any i.e. petroleum based products to loosen the rotor.
- Pour MIXED MATERIAL into the hopper.
- Holding the nozzle assembly, adjust air stem at the tip, in or out, to change the pattern of material being applied.
- Visually check the ball valve handle position on the spray gun. The valve must be fully opened (handle parallel to 3/4" pipe) to allow material flow.
- NOTE: Ball valve cannot be used to feather material flow. Use it only to stop material oozing afterspray. The unit is shut off by either the red remote switch on the nozzle assembly or the toggle switch on the control box.
- 7. Pull the red on/off switch located on the hose assembly just below the nozzle to turn on the machine and spray your material.
- 8. When you want to stop spraying, simply push the red on/off switch in and the material pump will immediately shut down.

NOTE: The air compressor will continue to run until turned off at the hopper. (See Step 2.) **Do not pump** any material or water with soap unless the compressor is running.



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### **Cleaning Instructions**

- After all material has been removed from the hopper, fill with clean water and liquid dishwashing soap. (Note: **Do not use** automatic or powdered dishwasher soap.) Repeat Steps 2 through 8 until all material remaining in the hopper, material hose and nozzle assembly has been flushed out. The water should spray clear when proper clean-out has been accomplished.
- Service air compressor filter every 500 hours. Use compressed air to remove particles accumulated from the filter.

### Optional By-Pass Valve Usage Instructions

NOTE: The by-pass valve is used only when spraying wall texture materials.

- 1. Locate the by-pass valve in the front of the machine.
- To reduce material output of the pump, back out the butterfly handle on the by-pass valve until desired volume of material is attained. When the by-pass is being used, material will automatically recirculate from the hopper through the by-pass valve and back into the hopper via the by-pass hose.
- To return the pump to non by-pass operation, simply turn in the butterfly handle all the way for full flow or until desired increased material volume is attained.

NOTE: If the rotor will not turn, use an adjustable wrench at the pumpshaft square end to break the rotor free. CAUTION: REMOVE ANYWRENCH USED ON PUMPSHAFT SQUARE END BEFORETURNING ON THE UNIT.

# Assembly and Operating Instructions

### Assembly:

- Connect female end of 3/4" material hose to threaded end of pump outlet/by-pass valve.
- 2. Connect female fitting end of 1/2" air line to 1/2" pipe nipple located above and to the right side of pump outlet/by-pass valve.
- 3. Install opposite end of 3/4" material hose to nozzle.
- 4. Connect male fitting on 1/2" air line to female fitting located at nozzle.
- 5. Plug 3-prong twist lock male into matching female located on control box.
- 6. Using 3-prong extension cord, plug into 3-prong connector in front of machine, then into any standard 120 volt household electrical plug outlet.

### MACHINE IS NOW READY TO OPERATE.

NOTE: The MINI-SPRAYER was exclusively designed to spray the following non-aggregate materials:

- Full and Simulated Acoustic
- Wall Texture
- Fireproofing Materials

For best results, make certain that the material to be sprayed is mixed properly according to manufacturer's recommendations and has an even consistency. DO NOT mix material to be sprayed in hopper.







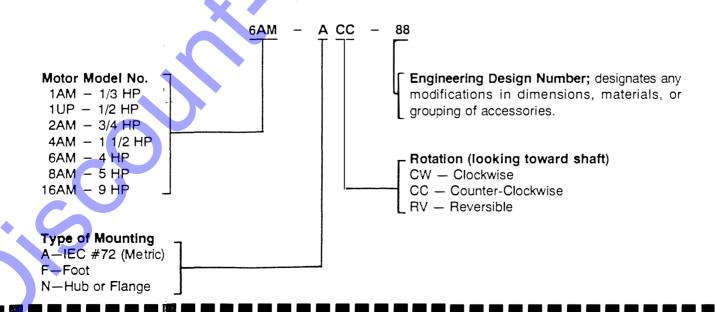
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### PARTS LIST and OPERATING INSTRUCTIONS FOR MODELS—

6AM,8AM, and 16AM

### LUBRICATED AIR MOTORS

### EXAMPLE OF MODEL NUMBER DETERMINATION FOR GAST AIR MOTORS



Warning: These air motors are not designed for use with explosive gases.

### **OPERATING and MAINTENANCE INSTRUCTIONS**

#### CONSTRUCTION

Your air motor is a precision built rotary type motor. The vanes take up their own wear and will last 5,000-15,000 hours depending upon speed, method of oiling, operating pressure, and the precautions taken in maintaining the motor. The type of shaft seal used does not lend itself to operating pressures above 100 P.S.I. (6.89 Bar-Metric). The air motor is cooled by expanded air and can, therefore, be used in ambient temperatures up to 250°F.

#### INSTALLATION

The muffler is shipped with the air motor, but not installed. Install a moisture trap and filter in the air line ahead of motor. For efficiency of output and control of speed, use air lines the same size or in the next pipe size larger than the intake port of the motor. A single rotation motor will operate properly in only one direction. A reversible motor will work equally well in both directions. A 4-way valve which can be connected by piping to both air ports of the motor will make reversing possible. When coupling or connecting the motor to a driven member, avoid any end or side thrust on the shaft and especially do not hammer on shaft itself or on the coupling or pulley you might attach.

### LUBRICATION — USE A DETERGENT SAE #10 AUTOMOTIVE ENGINE OIL (Gast Part #AD220)

An automatic air line lubricator, must be installed in the air line just ahead of the air motor. The lubricator should be adjusted to feed one drop of oil for every 50-75 CFM of air going through the motor. Air consumption figures for various models at various speeds and air line pressures can be obtained from your local Gast Representative or the factory. Lubrication is necessary for all internal moving parts and rust prevention. Excessive moisture in the air line can cause rust formation in the motor and might also cause ice to form in the muffler due to expansion of air through the motor. The moisture problem can be corrected by installing a moisture separator in the line and also by installing an aftercooler between the compressor and air receiver.

#### **OPERATION**

The starting torque is less than the running torque and could vary depending on the position at which the vanes stop in

relation to the air intake port. The speed and torque can be regulated by using a pressure regulator or a simple shut-off valve to obtain desired power and conserve air. **Caution:** Do not allow the air motor to "run free" at high speeds with no loads. Excessive internal heat build up, loss of internal clearances and rapid motor damage will result. (See Table #3 for air motor limitations).

#### **SERVICING**

If the motor is sluggish or inefficient try flushing with solvent\*. To flush a unit, disconnect air line and muffler and add several teaspoons of solvent directly into the motor. Rotate the shaft by hand in both directions for a few minutes, reconnect the air line and slowly apply pressure until there is no trace of solvent in exhaust air. Flush unit in a well ventilated area. Relubricate the motor with a squirt of oil in the chamber. If the vanes need replacing or foreign materials are present in motor chamber, an experienced mechanic may remove the end plate opposite the drive shaft end. Do not pry with a screwdriver. It will dent the surface of the plate and body causing leaks. A puller tool should be used which will remove the end plate while maintaining the position of the shaft. New vanes should have the edge with the corners cut on angle or the notched edge (if reversible) towards the bottom of the vane slot.

### HAZARD PREVENTION

\*Recommended solvent for air motors and lubricated pumps is Gast Flushing Solvent part #AH255, Dem-Kote 2X726, Loctite Safety Solvent, Inhibisol Safety Solvent, Dow Chemical Chlorothane or any nontoxic, nonflammable Industrial Cleaning Solvent.

**WARNING:** To prevent explosive hazard DO NOT drive this air motor with combustible gases. Injury and/or property damage will result.

WARNING: DO NOT USE KEROSENE OR OTHER COMBUSTIBLE SOLVENTS.

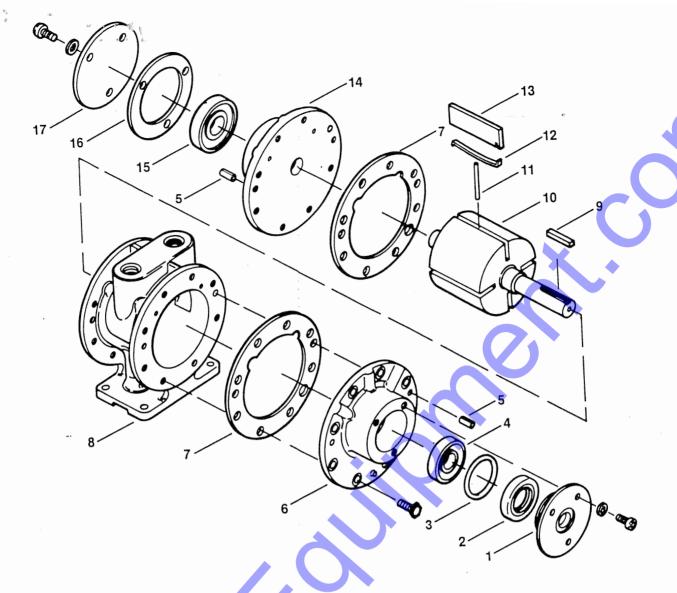
**WARNING:** Eye protection is REQUIRED. Keep face away from exhaust port and do not flush unit with flammable solvent.

WARNING: Foreign material exiting the air motor can be hazardous.

**CAUTION:** Do not drive the air motor in excess of the recommended speeds.



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8AM-FRV-2B

										METRIC	
REF. NO.	DESCRIPTION	PART QNTY.	8AM-FRV- 2B	8AM-NRV- 5B	8AM-NRV- 28A	8AM-FRV- 30A	8AM-NRV- 32A	8AM-NRV- 42A	8AM-NRV- 50	8AM-ARV- 70	8AM-ARV- 71
1	END CAP, DRIVE	1	AC835A	AC835A	AC988	AC835A	AC988	AC835A		AC988	AC988
• 2	SEAL	1	AC839	AC839	AB936	AC839	AB936	AC839	AF281	AK420	AK420
• 3	"O" RING	1	AC808	AC808	AC989	AC808	AC989	AC808	AC989	AC989	AC989
• 4	BEARING, DRIVE END	1	AA735B	AA735B	AB927	AA735B	AB927	AA735B	AF816	AB927	AB927
5	DOWEL PIN	4	AB162	AB162	AB162	AB162	AB162	AB162	AB162	AB162	AB162
6	END PLATE, DRIVE	2	AC964/2	AC963	AC965	AC964/2	AC965	AC963	AF277	AC421	AC421
• 7	BODY SPACER GASKET	2	AC888	AC888	AC888	AC888	AC888	AC888	AC888	AC888	AC888
8	BODY	1	AC877A	AC878C	AC878C	AC877A	AC878C	AC878C	AC878C	AC878G	AC878G
9	DRIVE KEY	1	AB136D	AB136D	AB136D	AB136D	AB136D	AB136D		AK419	AK419
10	ROTOR ASSEMBLY	1	AC977	AC977	AC986	AC977A	AC986A	AC977A	AF279	AC986D	AC986C
•11	PUSH PIN	2	AC879	AC879	AC879	AC879/4	AC879/4	AC879/4	AC879	AC879	AC879/4
•12	VANE SPRING	4	AC817	AC817	AC817	AC817/8	AC817/8	AC817/8	AC817	AC817	AC817/8
•13	VANE	4	AC816	AC816	AC816	AC816/8	AC816/8	AC816/8	AC816	AC816	AC816/8
14	END PLATE, DEAD	1	AC964			AC964					
●15	BEARING, DEAD END	1	AC894B	AC894B	AC894B	AC894B	AC894B	AC894B	AF280	AC894B	AC894B
●16	END CAP GASKET	1	AC837	AC837	AC837	ACL837	AC837	AC837		AC837	AC837
17	END CAP, DEAD	1	AC836	AC836	AC836	AC836	AC836	AC836	AF282	AC836	AC836
	MUFFLER ASSEMBLY	1	AC990	AC990	AC990	AC990	AC990	AC990	AC990	AC990	AC990
•	FELT	1	AC993	AC993	AC993-	AC993	AC993	AC993	AC993	AC993	AC993
	SERVICE KIT	1	K210	K210	K211	K283	K282	K283	K378	K282A	K282B

\*Denotes parts included in SERVICE KIT.
When corresponding or ordering spare parts, please give model and serial number.