

Deluxe Air Pressure Casting Machine Model #'S

INSTALLATION

99-002-D4AP

99-002-D4AP-A

MAINTENANCE

The points to look for in order to obtain a long and trouble free operation are:

- a. See that the oil fog lubricator bowl is always kept full of oil to the oil level mark. Good grade 10 weight motor oil is recommended (non-detergent).
- b. Remove the aluminum and steel plates above and below the rubber mold and put a few drops of oil on the rising shaft to insure proper lubrication of the shaft. Be careful to avoid pressing the motor switch which would activate the head (spinning). Do this once a month.
- c. Take out the main thrust bearing at the bottom of the shaft by lifting the plates from the head and holding up the shaft from the top. It is easier if a second person helps to perform this operation. Clean out the bearing with a solvent and degrease with a good bearing grease; reinstall. Do this every three (3) months.
- d. The main shaft bearings should have a good quality bearing grease pumped into them every six (6) months.

The motor is totally enclosed, permanently lubricated and requires no maintenance. An air filter has been fitted next to the oil fog lubricating bowl to extract any moisture and dirt preventing it from contaminating the moving parts of the machine. This should be cleaned by visual inspection.

Small amounts of moisture and dirt can be removed by merely pushing the button or loosening the screw at the bottom of the bowl. Larger amounts will require unscrewing the bowl and through cleaning.

SETTING/OPERATION

Your air pressure casting machine should be set to the required time cycle and it will start and stop automatically. Fifteen to twenty seconds is the usual cycle. The lights will indicate when another mold can be cast. The machine will stop by itself if you lift the lid. The reversing switch allows the spinning head to run in either direction as needed for best casting results. The speed can be adjusted by turning the handle on the lower left side of the machine. The speed of 450-500 RPM will be sufficient for most of your work. Thin castings will require a greater speed (R.P.M) than larger heavy castings. Speed should be adjusted according to the castings you are producing.

The air pressure casting machine locks the mold BEFORE it starts spinning and, therefore, should eliminate any shift. The bottom plate is self-adjusting and should exert even pressure on the mold.

OPERATING AIR PRESSURE CASTING MACHINE

- A. One sponge rubber mat should remain in the machine at all times and need not be changed for each mold.
- B. To change the pressure on the individual molds you can regulate the air pressure on the gauge either up or down by turning the knob on the top of the pressure regulator.
- C. Approximately 40 P.S.I (280kPa) on the gauge will cast most 9" (270mm) diameter molds, 12" (300mm) molds generally require 60-80 P.S.I. If you experience flashing or finning on your castings, increase the pressure until flashing is eliminated. If your castings are too thin, lower the pressure on the molds until you reach a point at which finning or flashing begins to show, then bring the pressure back until you just eliminate this finning and flashing.
- D. Adjustment of Timer – The timer on the casting machine can be set for any number of seconds to allow the operator to work at a continuous cycle.

Set the digital timer as follows:

1. First button on the right selects seconds, minutes, hours, etc
(Normal setting is "S" (seconds) .
2. Three middle buttons select quantity of time, e.g., 015S means 15 seconds
3. Last button on left should not be touched. Correct position is "C".

Generally these timers are set at between 10 and 20 seconds for most molds.

A certain amount of time is required for the metal to solidify in the mold. If this timer is set at too short a cycle, the metal will still be molten upon removing the mold from the casting machine.

Rubber molds for casting, especially large pieces, will last longer if allowed to spin slightly longer in the casting machine to allow the heat to dissipate as much as possible between pouring. This will help keep the mold as cool as possible and will prevent the rubber mold from becoming overheated and softening thus resulting in a distortion of the cavity which is to be casted.

PARTS LIST OF AIR PRESSURE CASTING MACHINE

1. Top Cover Plate (12" diameter) 99-007C)
2. Center Pour and Grip of Item #1
3. Bracket Arm of Item #36
4. Free Floating Pressure Plate of Item #36
5. Locking Nut of Bracket Arm Support Plate of Item # 36
6. Outer Shaft Housing of Item # 36
7. Inner Moving Shaft . (005-095-M)
8. Lower Pneumatic Assembly. (Order Parts Separately)
9. Shaft Adapter (005-090-M)
10. Thrust Bearing (005-076-M)
11. Adapter for Air Cylinder to Thrust Bearing (005-091-M)
12. Air Cylinder (005-304-M)
13. *Time Control, Indicating and Switch Control Panel, Reversing Switch
(order parts separate)
 - 13a New Digital Timer (005-055-N)
14. Motor (005-559-E220V / 005-560-E110)
15. Line Cord and Plug (000-050)
16. Rubber Pouring Funnel (99-390)
17. Variable Speed Motor Base (005-010-M)
18. Micro Switches for Motor and Air Cylinder Operation (000-067-C)
19. Clean Pilot Light (Indicating on Cycle) (000-076)
20. Main Line Manual On-Off Switch (28322)
21. Red Pilot Light (Indicating Cycle Complete) (000-075)
22. Air Pressure Regulator
23. Air Filter
24. Air Pressure Gauge
25. Oil Fog Lubricator
26. Automatic Reset Timer (005-051-E)
27. Self Aligning Bearing (For Main Shaft) (005-016-M)
28. Drive Shaft Pulley (9" Diameter) (005-021-M)
29. Drum of Casting Machine (005-300-B)
30. Variable Speed Motor Pulley (005-027-M)
31. Flange for Ceramic Crucible Spout (005-085-B)
32. Air Solenoid (Actuates Item #12) (005-080-E)
33. Reversing Switch (For Motor) 00-063)
34. Rubber V-Belt (4L-380) (005-032-M)
35. Air-Flow Control Valve (005-089-M)
36. 12" Head Assembly Less Alum Cover (005-301-M)

