

MAGUIRE PRODUCTS INC.

MPM-2[®], MPM-9[®], MPM-18[®], MPM-50[®]

MAGUIRE

Model MPM[®]

MPM-2 MPM-9 MPM-18 MPM-50

LIQUID COLOR PRE-MIXER

INSTRUCTION MANUAL

MAGUIRE LIQUID COLOR PRE-MIXER BENEFITS

When Liquid Color is introduced into the throat of a process machine, the dispersion of that liquid throughout the melt is primarily dependent on the mixing ability of the machine screw.

If all pellets could be individually pre-coated with liquid prior to entering the barrel, the job of the machine screw to complete the blending would be that much easier and much more thorough.

Material that is tumbled before processing produces parts that are

1. More uniform in color
2. Exhibit less streaking
3. Require less color input to produce the depth of coloring desired.

A minimum color savings of 20% to 30% can be expected and savings as high as 50% have been documented.

The MAGUIRE PRE-MIXER automatically and continuously pre-coats all of the natural plastic pellets just prior to their entry into the throat of the process machine. It is designed to mount directly to the feed throat of your process machine with your hopper and hopper-loader chamber just above the mixing blade. The Liquid Color Pump runs only during the screw return portion of the machine cycle, but the mixer blade turns continuously to provide the maximum degree of mixing for each machine cycle.



Safety Hazards and Notifications



HAZARD - ROTATING MIX BLADE

Mix Blades are driven with substantial torque. Never place your hand in the Mix Chamber while the blades are rotating. **SERIOUS INJURY WILL RESULT.** Always disconnect power before servicing.



HAZARD - SHARP MIX BLADES

Over time, Mix Blades may become **RAZOR SHARP**. **ALWAYS** be careful when **TOUCHING** or **CLEANING** these blades. Check for Sharp Edges frequently. Replace Blades if a Hazard exists.



HAZARD - AUTOMATIC STARTUP

WARNING - Blender may start automatically without warning.



Eye Protection

Always wear safety glasses when using this equipment.

INSTALLATION INSTRUCTIONS

1. Remove the material hopper from your process machine.
2. Select the best orientation for your Pre-Mixer.
 - *The viewing window
 - *The liquid color inlet port position.
 - *The ease of disassembly for cleaning.
3. Locate and drill the proper bolt pattern on both top and bottom plates of the Pre-Mixer frame so that the Pre-Mixer may be bolted directly to the feed throat of your process machine and the hopper you have just removed may be bolted to the top of the Pre-Mixer. Models 9, 18, and 50 have an 8" pattern pre-punched.



NOTE: Be sure to mount the unit RIGHT SIDE UP.

The unit is right side up when the Liquid color port is near the top, and the baffle plate is positioned directly under the top plate. The stainless steel insert, between the support pillars, looks like a "U" when viewed from the end.

4. Once the unit is bolted into place and your hopper is placed on top of the Pre-Mixer, you may insert the color delivery tube through the plastic fitting provided. The tube should be inserted far enough to reach about halfway into the mixing chamber, about 5 inches. The Plastic fitting has an "O" ring in it that grips the delivery tube when the lock nut is tightened.
5. Models 2, 9 and 18 plug into any 110 Volt Outlet, Models 50 requires and 240-volt power source. On Models MPM-2 and MPM-9, the On/Off switch is located on the power cord. Model MPM-18 has a switch mounted to the frame. Turn on the mix motor when the flow of material has begun.



**DO NOT LEAVE THE MOTOR RUNNING WHEN
THE PROCESS IS IDLE FOR AN EXTENDED PERIOD.**

Continued running without material flow will cause the mix chamber to pack and eventually will cause the motor to burn up. Turn the unit off during idle periods.

If color is not being added, the mixer may be left off as material will continue to flow through the unit without difficulty.

NOTE: If your particular material does not flow readily over the material flow baffle, we can provide a custom insert with a greater slope.

DESIGN FEATURES

The MAGUIRE PRE-MIXER incorporates many unique design features that set it apart from the other Pre-Mixers (or Intermixers). They are as follows:

1. **WIDELY SPACED SUPPORT PILLARS** of the MAGUIRE Pre-Mixer provide superior strength and stability over conventional welded flange design. Customers report that even top-heavy hopper loads are not a problem in spite of the constant forward/backward motion of inserting and retracting the nozzle from the mold. First developed and offered by us in 1981, this safer design is now copied by many of our competitors.
2. **LARGE MOUNTING SURFACES** accommodate the widest range of hopper bases and bolt patterns. Model MPM-2 has 6" x 6" top and bottom mounting surfaces, MPM-9 has 10" x 10" surfaces, and MPM-18 has 10" x 14" surfaces. MPM-50 is 16" x 20".
3. **STAINLESS STEEL** construction of internal parts eliminates corrosion, discoloration and facilitates easy cleanup.
4. **NO TOOLS** are required to remove the inside wetted surface. This assures easy access for cleaning.
5. A **MATERIAL FLOW BAFFLE** greatly reduces motor torque requirements and improves mixing. As material flows into the Pre-Mixer chamber, it must first cascade over a sloped baffle plate. This baffle serves to remove the downward pressure caused by weight of material in the hopper above, thus preventing 'packing' in the mixing chamber. Motor torque requirement is a fraction of that required by conventional design Pre-Mixers so the motor runs cooler without overloading.
6. The **INTERNAL AIR POCKET** that exists under the baffle plate allows liquid color to be dropped into the mix from an air space. This eliminates the possibility of plastic pellets being forced into the open end of the tube and does away with the problems of **CLOGGING** of the liquid color tube. Faster Mixing results from this air pocket because the material has space to move resulting in greater material turbulence during mixing.
7. The **ENGINEERED MIXING BLADE DESIGN** creates a complex mixing pattern. In addition to rotational mixing, this blade design sets up a **CONVECTION** type of material movement from back to front, creating a complex circulation pattern resulting in more **UNIFORM** dispersion of color.
8. A **LARGE VIEWING WINDOW OF ½"** acrylic allows you to examine the interior of the mixing chamber and monitor material flow and color mixing. This window is **HINGED** for easy access to the mix chamber. Model MPM-18 has a stainless access door below, with a clear window hinged to the top of that door.
9. **SAFETY** for your maintenance personnel is assured through the use of an electrical interlock switch located behind the hinged access door. When the door is opened for access to the mixing chamber, the motor cannot run.
10. The number portion of the model number refers to the capacity of the mix chamber in pounds; 2, 9, 18 and 50 pound capacities.

Model MPM-9, our most popular unit, has a **LARGE 9-POUND CAPACITY** which surpasses the competition in assuring uniformity of color from cycle to cycle. Model MPM-2, with its small footprint, is for small injection molding machines, such as 25 and 50 ton presses. Model MPM-18 is for large molding machines where the shot size is greater than 6 pounds, and high throughput extruders.

MAGUIRE PRODUCTS offers one of the MOST COMPREHENSIVE WARRANTIES in the plastics equipment industry. We warrant each MPM-2, MPM-9, MPM-18, MPM-50 Pre-Mixer manufactured by us to be free from defects in material and workmanship under normal use and service; our obligation under this warranty being limited to making good at our factory any Starve Feeder which shall within FIVE (5) YEARS after delivery of such Pre-Mixer to the original purchaser be returned intact to us, transportation charges PREPAID, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties expressed or implied and of all other obligations or liabilities on our part, and MAGUIRE PRODUCTS neither assumes nor authorizes any other persons to assume for it any other liability in connection with the sale of its products.



This warranty shall not apply to any Starve Feeder which shall have been repaired or altered outside MAGUIRE PRODUCTS factory, unless such repair or alteration was, in our judgment, not responsible for the failure; nor which has been subject to misuse, negligence or accident, incorrect wiring by others, or installation or use not in accord with instructions furnished by Maguire Products.

Our liability under this warranty will extend only to Pre-Mixers that are returned to our factory in Aston, Pennsylvania PREPAID.

It should be noted, however, that we strive to satisfy our customers in whatever manner is deemed most expedient to overcome any problems they may have in connection with our equipment.

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