



# Batchmaster™ III

## Product Information

### Application:

The Batchmaster III batch mixing system is the third and latest generation batching system from Gruber Systems. This system combines proven Batchmaster technologies with the latest advancements to deliver the most accurate, fastest and easiest-to-use batch mixing system ever offered. This reliable system will reduce your labor costs, and minimize material waste from inefficient manual mixing operations.

Combining the best features of weight-based and volumetric metering, the dispensing system can be used in three different metering modes - Weight Gain, Weight Loss, and Volumetric. The system will store up to 20 different cast polymer matrix formulations, and mix those with push button convenience. The system also features a completely redesigned user-friendly and convenient touch screen control panel.

### Description:

**The standard base system includes the Resin System and Filler Systems described below.**

**Resin system:** The Batchmaster III uses a rotary gear pump for the fastest most accurate metering of resin in the industry. Along with the computer controlled resin heating system the operator has the ability to meter heated resin to a desired output temperature. When the resin system is in the stand-by mode the resin is recirculated through the heat exchanger to constantly maintain control of the resin temperature. If desired, additional valving can be added to the system to recirculate and heat the resin source/day tank to a second desired temperature.

**Filler System:** The filler metering hopper on the Batchmaster III uses a three inch core auger that accurately dispenses the desired amount filler requested. The hopper has an integrated anti bridge system to ensure accurate metering. With the addition of a weight loss scale the filler metering system will accurately meter by weight those materials that don't normally flow well. The Batchmaster III also has the ability to operate an optional second filler hopper. This feature will allow the user to produce matrix with multiple filler combinations. Built into the metering hopper is a level sensor that will automatically activate the optional ground hopper that will keep the metering hopper filled. This ground hopper system gives the user the ability to use a bulk filler system freeing up the task of loading individual bags of filler and reducing the accompanying paper waste.

**The following Catalyst and Base Color Systems are optional sub-systems:**

**Catalyst Metering System (option):** The most recent improvement in the Batchmaster III. The integrated catalyst system in the Batchmaster III accurately meters the desired quantities of catalyst. The system has a six gallon reservoir that allows an operator to run all day without adding catalyst. The system while in stand-by mode is continually circulating and offers a consistent blend of catalyst with immediate and accurate delivery. The pump used in the Batchmaster III is the same pump that has been used in our continuous cast machines for years. **Order PN 30BMCA.**

**Base Colors (option):** The Batchmaster III base color system utilizes our time-tested and proven base color technology found in Gruber's other continuous casting systems. In addition, rotary gear pumps are employed to continually circulate the pigment base while in the stand-by mode, minimizing any material settling and ensuring consistent and accurate material delivery. The unit also has the ability to operate two separate base color systems. **Order PN 163770.**

### Order Information

150131	Batchmaster™ III System- Volumetric only	CMBCS-1C	Add Second Base Color
180389	Batchmaster™ III Weight Loss Option	150445B	Ground Hopper for Batchmaster
30BMCA	Catalyst Metering System Option	150160	Bulk Bag Suspender Frame, Complete
163770	Base Color System with Stand		



## Yearly Cost Saving Potential

The following chart shows the cost savings potential by using heated resin in batch production.

		YEARLY COST SAVINGS			
		Resin Percentage Change			
		-2%	-3%	-4%	-5%
Average Pounds Matrix Produced Daily	2,000	\$12,144	\$18,216	\$24,288	\$30,360
	4,000	\$24,288	\$36,432	\$48,576	\$60,720
	6,000	\$36,432	\$54,648	\$72,864	\$91,080
	8,000	\$48,576	\$72,864	\$97,152	\$121,440
	10,000	\$60,720	\$91,080	\$121,440	\$151,800

The above chart assumes a resin cost of \$1.25 per pound, filler cost of \$0.10 per pound and 260 shop days per year.

For example, a shop producing an average of 4000 lbs/day that drops the matrix resin percentage from 26% to 23% (a 3% percent change) would have a yearly savings of \$36,432 due to reduced resin cost. Matrix waste savings and labor savings would add to these savings.

### Specifications:

Resin Unit	<ul style="list-style-type: none"> <li>• Output - approximately 32 lbs./minute</li> <li>• Up to 2500 centipoise resin, no particulates</li> <li>• 2" Y" type strainer with chemical hose and quick disconnects</li> <li>• Integrated computer controlled resin heating system with recirculation</li> <li>• Cleanable heat exchanger</li> <li>• Control output temperature as well as recirculation temperature.</li> <li>• Ability to control day tank/source temperature</li> </ul>
Control Unit	<ul style="list-style-type: none"> <li>• PLC based</li> <li>• Programmable batch size from 0 to 999 pounds</li> <li>• Up to 20 recipe combinations (of resin, filler #1, filler #2, catalyst, base color #1 or base color #2)</li> <li>• Large touch screen control</li> <li>• Start/Stop control buttons for resin, fillers, catalyst, and base-color</li> <li>• Four pre-programmed batch sizes/recipe selections, as well as on-demand custom batch sizes</li> <li>• Three output modes weight gain, weight loss, or volumetric</li> <li>• Fault system and built-in diagnostics</li> <li>• Dispensing in automatic sequence or manual mode</li> <li>• Raw material totals</li> <li>• Password protected recipes and data</li> </ul>
Filler Unit	<ul style="list-style-type: none"> <li>• Output rate approximately 125 lb/minute</li> <li>• Integrated anti-bridging device</li> <li>• Integrated Ground Hopper control system</li> <li>• Weight loss/gain option available</li> </ul>
Catalyst System (optional subsystem)	<ul style="list-style-type: none"> <li>• Output up to 230 grams per minute</li> <li>• Positive displacement recirculation pump</li> </ul>
Base Color System (optional subsystem)	<ul style="list-style-type: none"> <li>• Output up to 500 grams per minute</li> <li>• Rotary gear pump recirculation</li> <li>• 7 gallon reservoir</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>• Frame size - 24" wide x 84" deep x 81" high</li> <li>• Electrical/Control box - 16" wide X 16" high x 6" deep</li> </ul>
Electrical Requirements	<ul style="list-style-type: none"> <li>• 75 amp, 230 VAC, 3 phase 60 Hz</li> </ul>
Air Requirements	<ul style="list-style-type: none"> <li>• 80 psi, 10 cfm</li> </ul>



Molds and Process Control Equipment for Composites Manufacturing

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