

# Gravimetric Blenders

## Product Guide



### OVERVIEW

Overview of our Maguire  
WSB Blender Range



### HOW IT WORKS

Key Benefits  
Controls & Settings  
Easy Materials Changes  
Materials Usage Data



### PRODUCT INFORMATION

WSB Options  
WSB Accessories  
Technical Specifications



### CONTACT

Find out your local  
contacts or where your  
regional head office is  
located.

**THE MOST  
POPULAR  
GRAVIMETRIC  
BLENDERS  
WORLDWIDE**

**MAGUIRE**<sup>®</sup>  
*Intelligent Simplicity*

## Gravimetric Blenders

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Maguire Products offers one of the  
most comprehensive warranties in  
the plastics industry.

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The most popular gravimetric blenders  
worldwide.

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## HOW IT WORKS

Total control of a processors most  
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# OVERVIEW



## The most popular gravimetric blenders worldwide

Nine blender series with over 120 models plus options to add on a range of feeders for pellets and powders as well as integrate liquid colour.

OVER  
**49,000**  
UNITS SOLD  
WORLDWIDE

### Blenders Available

WSB MB MICRO BLENDER

WSB 900 SERIES

WSB 140MP MICRO PLUS

WSB 1800 SERIES

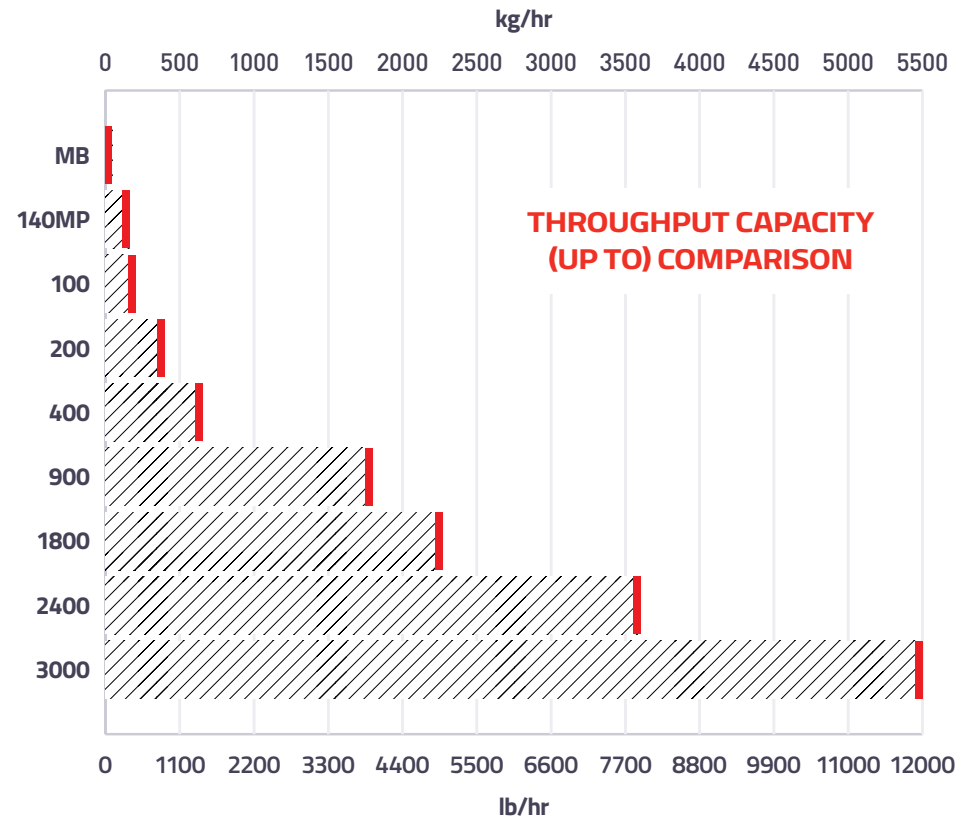
WSB 100 SERIES

WSB 2400 SERIES

WSB 200 SERIES

WSB 3000 SERIES

WSB 400 SERIES



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## Blenders Available

### SMALL



#### MB MICRO BLENDER

- 5 models available
- Up to 100 lb/hr (45 kg/hr)
- Ideal for small injection machines
- Easy flow regrind corner valve
- Removable hoppers for quick color changes
- Up to 4 components



#### 140MP MICRO PLUS

- 5 models available
- Up to 350 lb/hr (160 kg/hr)
- Optional loader lift for fast clean out
- For injection molders, small extruders, and central blending
- Removable hoppers for quick color changes
- Up to 4 components



#### WSB 100 SERIES

- 5 models available
- Up to 450 lb/hr (200 kg/hr)
- For injection molders and small extruders
- Removable hopper option for quick color changes
- Up to 4 components

### MEDIUM



#### WSB 200 SERIES

- 12 models available
- Up to 900 lb/hr (400 kg/hr)
- For injection molders, small extruders, and central blending
- Removable hopper option for quick color changes
- Up to 8 components



#### WSB 400 SERIES

- 12 models available
- Up to 1,450 lb/hr (650 kg/hr)
- For small to medium extruders, large injection machines and central blending systems
- Removable hopper option
- Up to 8 components



#### WSB 900 SERIES

- 21 models available
- Up to 4,000 lb/hr (1,800 kg/hr)
- Designed for large extruders, blown film lines and central blending systems
- 2, 4, or 6 compartment hoppers
- Up to 6 feeders

**LARGE**



**WSB 1800 SERIES**

- 21 models available
- Up to 5,000 lb/hr (2,270 kg/hr)
- Ideal for high output extruders and large central blending systems
- 2, 4, or 6 compartment hoppers
- Up to 6 feeders



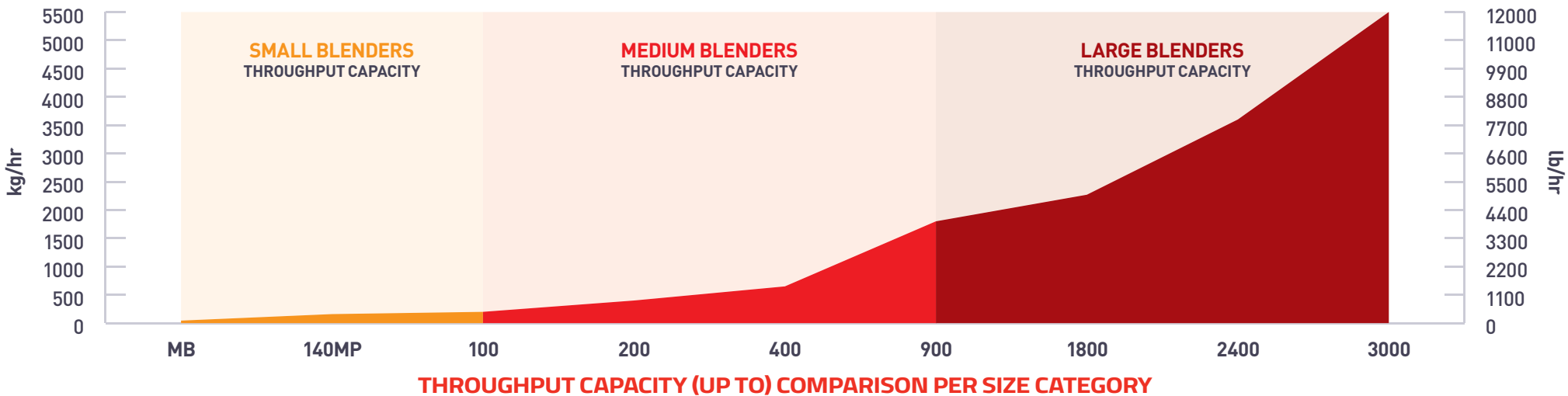
**WSB 2400 SERIES**

- Capable of handling bulk powders like additives and wood flour
- Up to 8,000 lb/hr (3,600 kg/hr)
- High flow dispense valve rated at 10,000 grams/second
- For as many as 12 ingredients



**WSB 3000 SERIES**

- Capable of handling bulk powders like additives and wood flour
- Up to 12,000 lb/hr (5,500 kg/hr)
- High flow dispense valve rated at 10,000 grams/second
- For as many as 12 ingredients



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# HOW IT WORKS



## Key benefits

Complete management and total control of a processors most expensive operational cost – raw materials.

### ALL MATERIALS METERED BY WEIGHT

- Accuracy is constantly monitored.
- Automatic compensation for material variations.

### VIBRATION MANAGEMENT

- Load cell readings that have been compromised by machine shock or vibration are detected and discarded.
- Many models may be mounted directly on the process machine.

### VERY SIMPLE OPERATION

- Load hoppers with material: regrind, natural, colour and additive.
- Set thumbwheel switches for percentage desired.
- Turn controller on.
- The unit now operates automatically, adding components in the proper percentages. If material runs out, an alarm sounds.

### ADVANCED DISPENSE TECHNOLOGY

- Batch to batch blend ratio is held to 0.1%.
- Advanced error-correction logic recognizes even miniscule errors and makes a correction for perfect blend ratio every time.
- Micro-Pulse™ dispense capability is 3 to 4 pellets per dose.

### AUTOMATIC RE-CALIBRATION

- Material flow rate is constantly monitored, and each batch is followed by a correction routine to deliver perfect dispense weights.



# Controls and settings

Advanced controls provide flexibility and accountability.

## Advanced Controller

All the features of the standard controller plus the ease of touch screen navigation. This optional control includes an intuitive, user-friendly touch screen and ethernet connectivity.

*Unique onboard wireless capability eliminates the cost of installing cable throughout the production area and readily links to other wireless equipped machines.*



COLOUR  
**touch  
screen**  
CONTROL  
PANEL

**Material  
Usage Data**  
ON SCREEN  
USB REPORT  
COMPUTER



## Standard Controller

Enter settings for percentage of color, additive or regrind on the thumbwheel switches, and the system does the rest. Clear messages in 9 languages replaces coded readout.

*User-friendly interface:*

- *2-line, 40-character vacuum fluorescent display.*
- *USB port included for software updates, printers and documentation.*
- *Ethernet capability now standard.*

## Advanced Controller Features

### TOUCH SCREEN CONTROL

A single control with Ethernet connectivity and intuitive 5.5" color touch screen controls all functions of all Weigh Scale Blenders®

### EASY COMPONENT ASSIGNMENT

Easy assignment of each component type on a single screen

### INTUITIVE DISPLAY

Intuitive display and tracking of all parameters for up to 12 ingredients

### EASY ACCESS TO PARAMETERS

Set Control Times, Vibration Control, Weight Limits, Components, Regrind Control, and Mixer

### RECIPE STORAGE

Enter recipes as percentages or as ratios - stores up to 99 internal recipes

### RECORD KEEPING

Material usage, alarms and operation details are easily downloaded to a USB drive or a printer

### FLEXIBLE COMMUNICATIONS

Ethernet connectivity

### AUTOMATIC CALIBRATION

Auto self-check and load cell calibration

### PASSWORD SECURITY

Two-level password security

### SOFTWARE UPDATES

Can be uploaded via USB port



# Easy materials changes

The Gravimetric Blenders has been designed to easily manage material changes that will reduce cleaning and re-calibration times, ensuring continued productivity.



### REMOVABLE WEIGH BIN

For quick access to the mixing chamber



### EASY MATERIAL ACCESS

To all material contact surfaces



### EASILY REMOVE

Mixing blade and stainless steel liner



### REMOVABLE BINS

Quick disconnect of pneumatic lines allows fast removal, cleaning, and replacement when changing colors or materials (available on many models)

## THIRD PARTY CONNECTIVITY

Maguire can provide several methods to allow customers to connect their blenders to other systems, including **Central PLC Control Panels**, **SCADA systems**, **Plant Wide Control Systems**, or **Accounting Systems** managing materials stocks.

Examples of these have included:



## NETWORKING

Connections can either be at a software level utilizing **SQL** or **OPC** based links, or alternatively machine to machine communications via Maguire's open source **MLAN** protocol, or industry leading fieldbus protocols such as **Industrial Ethernet**, **Profibus**, **DeviceNet** and **Modbus TCP/IP**.



## THE BENEFITS

The value of integrated data for proper production planning and control contributes enormously to the planning and control of most plastics processors' largest cost – raw materials. By proper, active reporting Maguire blenders provide precise information on materials consumption allowing for better control of inventory, improved purchase planning, quality control, data for ISO and proper planning for job costing.



# G2 Networking Software

The G2 software package makes possible rapid two-way communication between a PC and the controllers of Maguire® Weigh Scale Blenders on multiple processing machines.

*This advanced technology enables manufacturers to control the single largest cost factor in plastics processing today... **RAW MATERIALS***

## Material Usage Reports

Usage reports can be generated based on many combinations of criteria such as time, date, blender ID number, part number, work order number, operator number, recipe number, material type, etc.

## Alarm Functions

G2 detects any alarm in the network and reports location and description of the alarm.

## Ability To Download/Update Recipes

G2 users can download recipes to be certain that the correct recipes are running on the proper machines. Recipe settings may be up-dated from a remote location according to part number, work order number, operator number, recipe number, etc.

## Security

Extensive security functions are provided to selectively limit access to recipes and blender operation. There are 3 classes of user password security with predefined templates: Administrator, Supervisor, and Operator. Each user's privileges may be further refined by adjusting over 30 different security fields.

## Advanced Inventory Management Programs

Inventory levels can be monitored, and reorder points can be flagged to notify purchasing when low levels are reached. In addition a material accounting record allows entry of material cost to track inventory value on a real-time basis.

## Instant Access to Maintenance Updates and Upgrades

Software updates/upgrades are immediately available at – <http://www.maguire.com/page.php/downloads.htm>

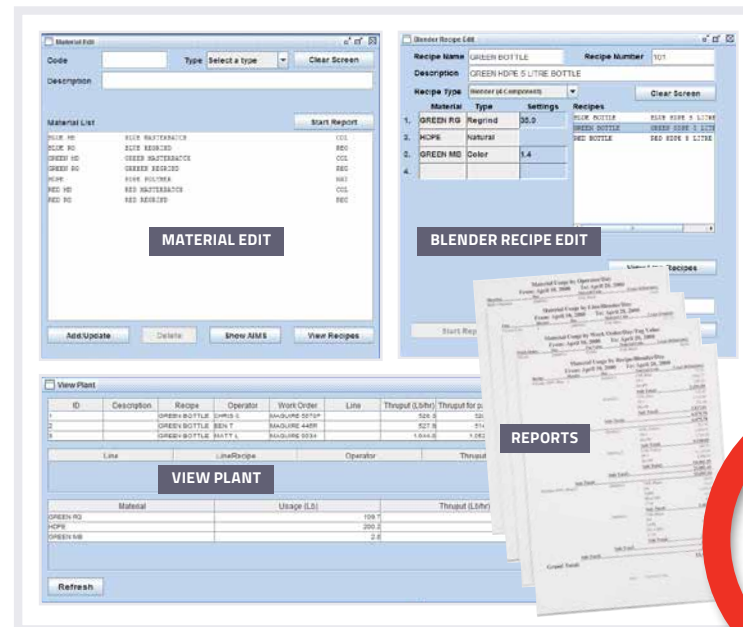
where you will find new programs or maintenance updates may be downloaded directly to the user's system.

## Multilingual Versions

G2 is available in English, German, Spanish, Italian, French, and Dutch.

## Multiplant Networking

G2 technology expands the potential for multiplant and even multinational networking.

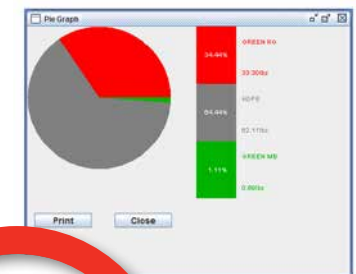


The screenshot shows the 'Examine A Blender' window for Blender ID 1. It displays a table with columns for Name, Usage, Time Period, and Average Thruput. The data is as follows:

Name	Usage	Time Period	Average Thruput
GREEN BOTTLE	102.0000	11 min	515.0000/hr
Orange C	102.0000	11 min	515.0000/hr
MAGUIRE 5610H	102.0000	11 min	515.0000/hr

Below this table is another table with columns for Type, Setting, Usage, Time Period, and Average Thruput:

Type	Setting	Usage	Time Period	Average Thruput
Regrid	50	25.0000	11 min	179.2000/hr
Natural	500	66.4000	11 min	332.8000/hr
Color	1.4	0.9500	11 min	4.7750/hr



TAKE A **FREE TEST DRIVE**

Download our demo G2 Software package from the Maguire website [www.maguire.com](http://www.maguire.com)



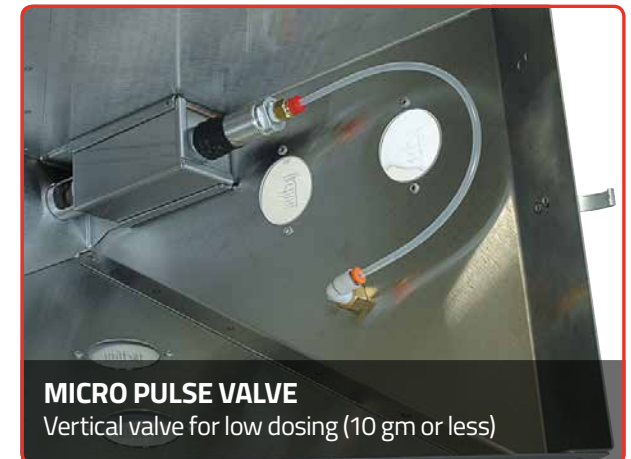
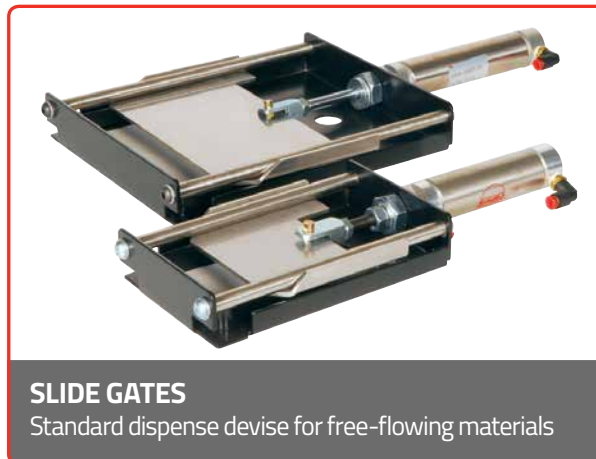
## Blender and Feeder Options

WSBs utilise many different types of dispense devices to accurately meter a variety of materials.

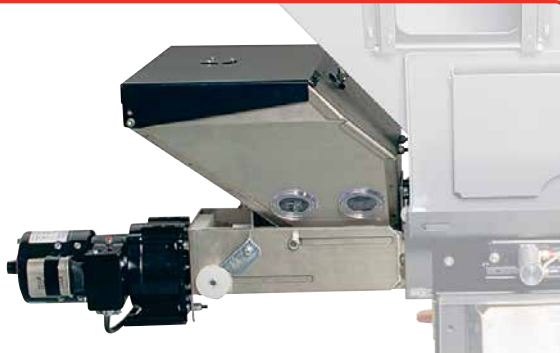
The selection of a dispense device depends on 3 factors:

- **size of the blender**
- **volume of dispense**
- **material flow characteristics**

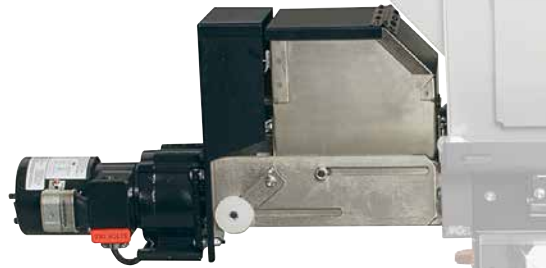
### Dispense Device Selection



## Add-on Feeder Options



**ADD-ON PELLET FEEDER**  
For low bulk density powders



**ADD-ON POWDER FEEDER**  
Model AWF-8P



**LOADER SUPPORT ASSEMBLY**  
Model ASRH



**ADD-ON LIQUID COLOUR FEEDER**  
Model AWL



**WOOD FLOOR/POWDER FEEDER**  
For low bulk density powders

# Accessories

WSBs utilise many different types of accessories to enhance your production output.

These include:

- **Storage & Loading**
- **Access & Cleaning**
- **Blender Floor Stands**

## Storage & Loading



**REMOVABLE HOPPER**  
Model as543



**BRIDGE BREAKERS**  
Model WBB



**LOW LEVEL ALARMS**  
Model LLA-6



**DRAIN PORTS**  
Model HSG



**GVL – GLASS-VU LOADER**  
Model GVL-10



**ML SERIES VENTURI LOADER**  
For removable hoppers or feeders – Model ML-1



Hopper extensions are available when additional hopper capacity is required. For series WSB-100 through to WSB-3000. The flared design greatly increases hopper capacities. Straight sides are also available.



**HOPPER EXTENSIONS**  
Hopper extension model WRR-4W, show on WSB-440

**Access & Cleaning**



**MATERIAL DRAIN CHUTES**  
Model 572



**SELF DRAINING MIX CHAMBERS**  
Model KIT-019



**SENSOR BLOW OFF**  
Model KIT-021



**MAGNET DRAWERS**



**CLEAR-VU SURGE HOPPER**  
Model MCSH



**CONTROLLER REMOTE CABLE KITS**  
Model AEK

## Blender Floor Stands



**FLOW CONTROL ASSEMBLY**  
Model FCA



**FLOW CONTROL BUTTERFLY VALVES**  
Model FCA-B



**ADDITIONAL STAND PROBES**  
Probe for vacuum take-off stand



**AWS STANDS**  
AWS Barrel or Gaylord style stands



**VTA BLENDER FLOOR STANDS**  
VTA stand + WSB-140R on VTA stand

# Technical Specifications

MODEL	BATCH SIZE		COMPONENTS	SLIDE GATES	FEEDERS	THROUGHPUT CAPACITY (UP TO)		OVERALL DIMENSIONS		WEIGHT	
	US (lb)	Metric (g)				US lb/hr	Metric Kg/hr	US (in)	Metric (cm)	US (lb)	Metric (g)
WSB-MB	0.9	400	4	4	0	100	45	16.5 x 16.5 x 23.3	42 x 42 x 59	50	23
WSB-140MP Micro-Plus	2.2	1000	4	4	0	350	160	30.1 x 27.9 x 32.3	76 x 71 x 82	150	68
WSB-140	2.2	1000	4	4	0	450	200	31.4 x 31.2 x 41	80 x 80 x 104	150	68
WSB-140R			4	4	0						
WSB-160			6	6	0						
WSB-220	4.4	2000	2	2	0	900	400	32.5 x 26.5 x 42	83 x 67 x 107	220	100
WSB-221			3	2	1						
WSB-222			4	2	2						
WSB-240			4	4	0						
WSB-241			5	4	1			34.9 x 72 x 116	89 x 72 x 116	270	123
WSB-242			6	4	2						
WSB-240R			4	4	0						
WSB-260			6	6	0						
WSB-420	8.8	4000	2	2	0	1450	650	32.5 x 26.5 x 42	83 x 67 x 107	275	125
WSB-421			3	2	1						
WSB-422			4	2	2						
WSB-440			4	4	0						
WSB-441			5	4	1			34.9 x 28.4 x 45.75	89 x 72 x 116	350	159
WSB-442			6	4	2						
WSB-444			8	4	4						
WSB-440R			4	4	0						
WSB-460			6	6	0						

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MODEL	BATCH SIZE		COMPONENTS	SLIDE GATES	FEEDERS	THROUGHPUT CAPACITY (UP TO)		OVERALL DIMENSIONS		WEIGHT	
	US (lb)	Metric (g)				US lb/hr	Metric Kg/hr	US (in)	Metric (cm)	US (lb)	Metric (g)
WSB-940	19.8	9000	4	4	0	4000	1800	46.5 x 28.5 x 60	118 x 72 x 152	420	191
WSB-941			5	4	1					460	209
WSB-942			6	4	2					500	227
WSB-944			8	4	4					580	264
WSB-960			8	6	0					430	195
WSB-1840	39.7	18000	4	4	0	5000	2300	46.5 x 40.5 x 87	118 x 103 x 221	615	280
WSB-1840			5	4	1					655	298
WSB-1840			6	4	2					695	316
WSB-1840			6	6	0					625	284
WSB-1840			12	6	6					865	393
WSB-3020	65-130	30-60 Kg	2 materials	n/a	As required	8000	3600	50 x 50 x 90	130 x 130 x 230	Contact Maguire	
WSB-3040			4 materials			5950	2700	50 x 50 x 90	130 x 130 x 230		
WSB-3043			7 materials			4850	2200	60 x 80 x 90	150 x 210 x 230		
WSB-3045			9 materials			2200	1000	80 x 85 x 90	200 x 215 x 230		

### Table Notes

- Most popular models shown
- Generally, slide gates are correct for components over 3% (may go lower with valve restrictors)
- MicroPulse valves are correct for dispenses less than 10g
- Compressed air - 60 psi recommended for WSB-MB, 80 psi recommended for all others (25 psi minimum)
- Compressed air consumption - 10 ft<sup>3</sup>/hr
- Voltage: 120V 60Hz, 230V 50/60Hz  
Exception: WSB-3000 models
- 230V 3Ph 60Hz, 480V 3Ph 60 Hz, 400V 3Ph 50Hz
- Contact MAGUIRE to determine actual throughput for your application based on resin type and bulk density

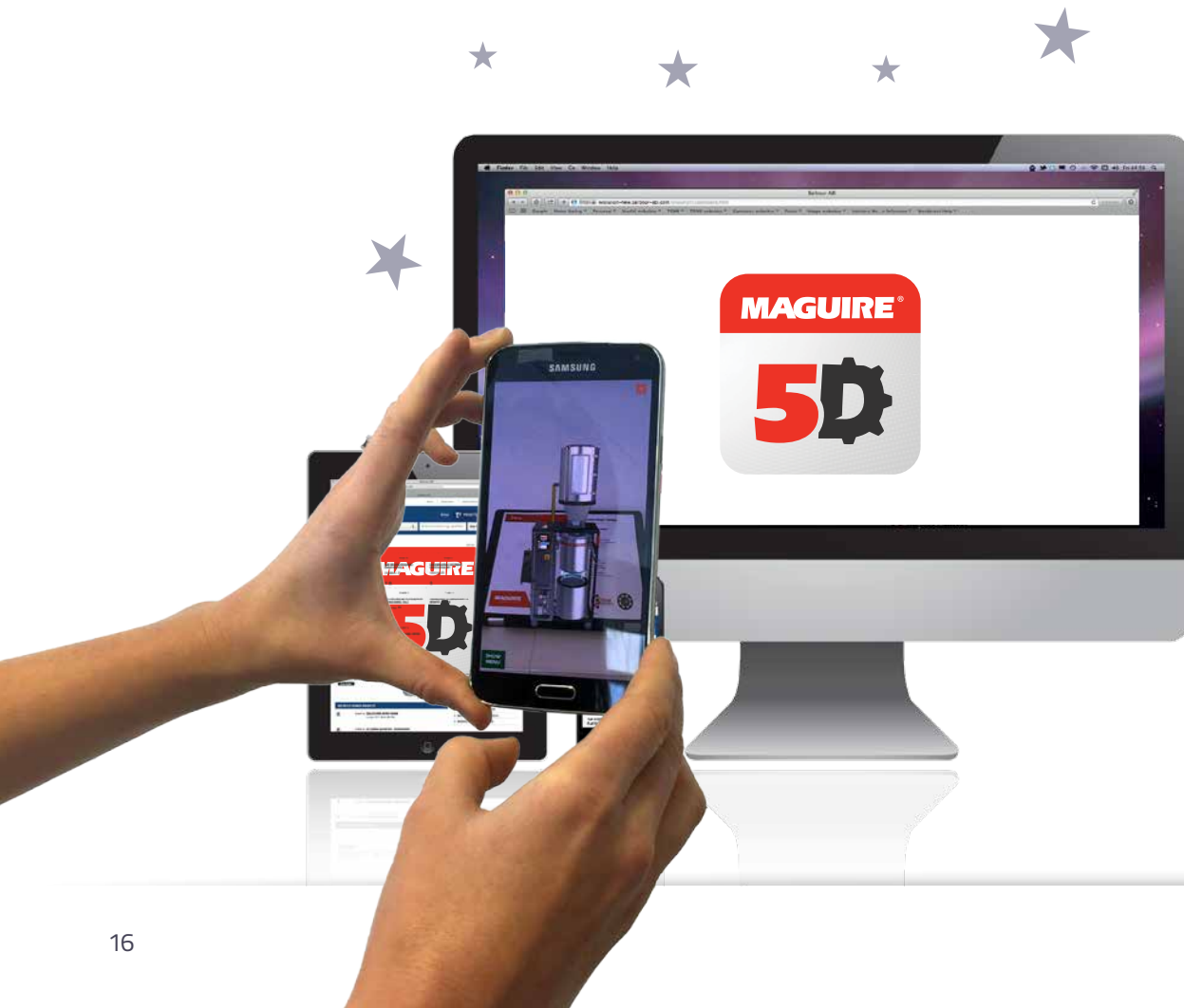


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# Maguire 5D – watch our products come to life

Download our Maguire 5D app and explore our WSB blender, VBD Vacuum Dryer and Liquid Colour products in a more detailed experience. Available at Android and iOS stores – just search for **Maguire 5D**.

For printable targets for these products, refer to our **Maguire 5D** webpage and start exploring NOW: <http://www.maguire.com/page.php/5d.htm>



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