



Blender Selection Guide

The Most Popular Blenders Worldwide.

This broad line of blenders has been the world leader for years. They accommodate a full range of throughputs up to 8,000 lb/hr. The standard, easy entry “thumbwheel” control can now be replaced with an optional color touch screen control for optimum blender operation including Ethernet connectivity and wireless capability. Multiple dispense devices are available to accommodate a wide range of materials.

— 5 —
YEAR
warranty



More Sizes and Models

Nine blender sizes and over 100 models allow processors to target their specific needs.

Advanced Dispense Technology

Batch to batch blend ratio is held to $\pm 0.1\%$ - and advanced error-correction logic recognizes even miniscule errors and makes a correction for perfect blend ratio every time.

Choice of Controllers

– Standard Microprocessor Control Enter settings for percentage of color, additive or regrind on the thumbwheel switches, and the system does the rest.

– Optional Color Touch Screen Control Provides easy entry of parameters with optimum blender operation, Ethernet connectivity and wireless capability.

Multiple Dispense Devices

Various dispense devices are designed to assist the dosing of pellets, regrind, additives, flakes and powders.

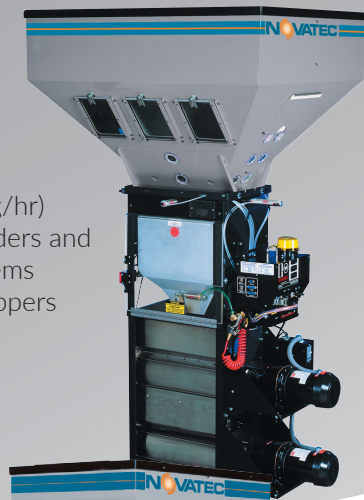
More Sizes, More Options, More Choices

5
YEAR
warranty

* On all NWB-DC+ models
* See warranty for full details.

Series 1800

- 21 models available
- Up to 5000 lb/hr (2270 Kg/hr)
- Ideal for high output extruders and large central blending systems
- 2, 4, or 6 compartment hoppers
- Up to 6 feeders



MaxiBatch™ Blender Series 2400 and 3000

- For hard-to-handle 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



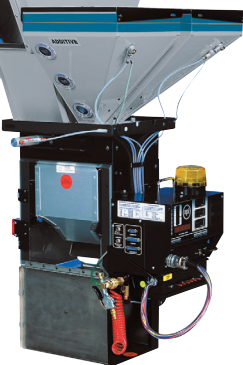
Series 900

- 21 models available
- Up to 3200 lb/hr (1450 Kg/hr)
- Designed for large extruders, blown film lines and central blending systems
- 2, 4, or 6 compartment hoppers
- Up to 6 feeders



Series 400

- 12 models available
- Up to 1450 lb/hr (650 Kg/hr)
- For small to medium extruders, large injection machines and central blending systems
- Removable hopper option
- Up to 8 components



Series 200

- 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



Series 100

- 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



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 or quick color changes
- Up to 4 components



MicroPlus

- 5 models available
- Up to 350 lb/hr (160 Kg/hr)
- Easy elevation of lids and loaders for easy clean out
- For injection molders, small extruders, and central blending
- Removable hoppers for quick color changes
- Up to 4 components



Nine blender sizes with over 100 models plus feeders for pellets, powders and regrind as well as liquid color pumps.

How it works

All Materials Metered by Weight

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

Immune to Vibration

- 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.

Automatic Re-calibration

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

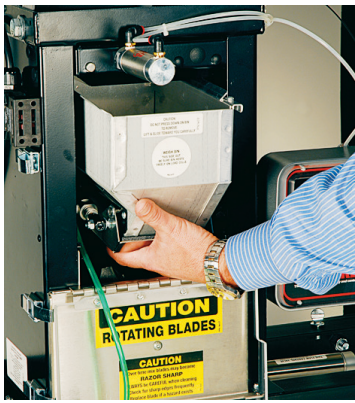
Very Simple Operation

- Load hoppers with material: Re grind, Natural, Color 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.

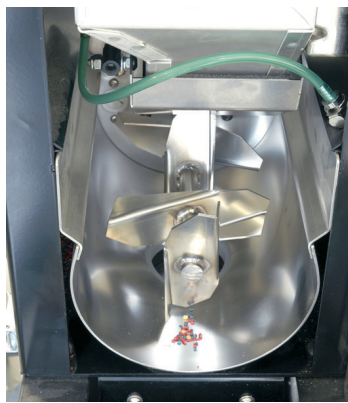
Advanced Dispense Technology

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

Easy Material Change



Removable weigh bin for quick access to the mixing chamber.



Easy access to all material contact surfaces.



Mixing blade and stainless steel liner are easily removed.



Removable bins are available on many models.

Quick disconnect of pneumatic lines allows fast removal, cleaning, and replacement when changing colors or materials.



Pneumatic Loader Lift (optional)

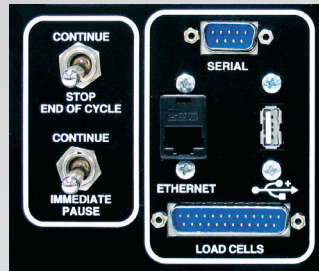
Elevates loaders and hopper lid providing easy access for cleanout.

Advanced Controls Provide Flexibility and Accountability

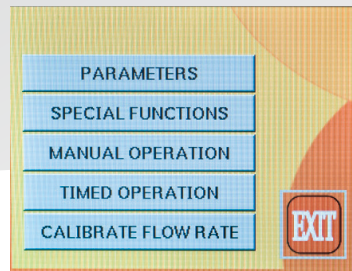
Standard Controller

Over 40,000 in use around the world

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 Color Touch Screen Control Option



Blender Set-up

Standard 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

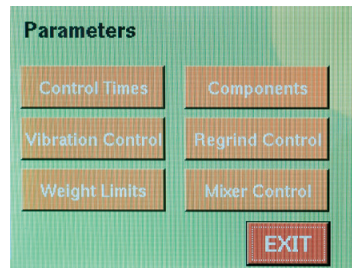
Password security

Two-level password security

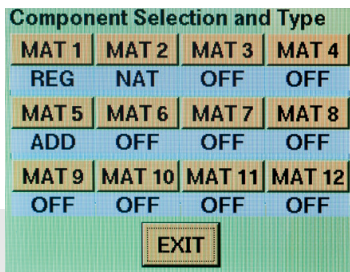
Software updates

Can be uploaded via USB port

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 on-board wireless capability eliminates the cost of installing cable throughout the production area and readily links to other wireless equipped machines.



Parameter Selection



Component Selection



2-Level Password Security



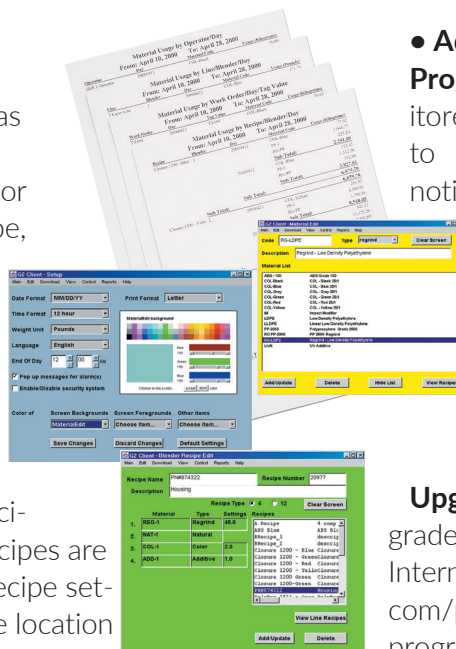
Optional Touch Screen Remote

Control Your Productivity Through Advanced Materials Management:

The G2 software package makes possible rapid two-way communication between a PC and the controllers of Novatec 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.

Key Gravimetric Gateway™ Networking (G2) Software features:

- **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 updated 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 and upgrades are immediately available over the Internet. Go to: <http://www.Novatec.com/page.php/downloads.htm> where 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.
- **Multi-plant Networking:** G2 technology expands the potential for multi-plant and even multinational networking.

Third Party Connectivity

Novatec 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 Oracle, SAP, AS400, Wonderware, Navision, as well as OEM Control systems.

Connections can either be at a software level utilizing SQL or OPC based links, or alternatively machine to machine communications via Novatec's open source MLAN protocol, or industry leading

fieldbus protocols such as Industrial Ethernet, Profibus, DeviceNet and Modbus TCP/IP.

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 Novatec 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.

LineMaster® – Extrusion Control

You can avoid yield and productivity losses... by installing LineMaster on your existing extrusion lines

The Novatec LineMaster system is simple to operate and cost effective. It works perfectly with all types of extrusion processes to ensure a uniform, quality product. From mono-layer, single extruder lines to multi-layer, co-extrusion lines LineMaster provides a solution that is both simple and cost effective.

Benefits of LineMaster™ :

- Improved product quality through permanent and consistent control
- Reduced material costs through improved yield
- Automatic regulation of extruder output
- Increased line productivity with fast start-up and reduced production scrap
- Quick product changeover
- Alarms and user security

Control Options – Production is effectively controlled by any 1 of 3 methods:

Method 1 - Throughput – Model XC-1

Method 2 - Weight per Length – Model XC-2

Method 3 - Calculated gauge control – Model XC-3

Throughput (lb/hr or Kg/h)

Model XC-1

XC-1 is ideal for simply controlling the throughput of an extruder or starve feeder. Applications include simple lb/hr or Kg/h extruder control where other downstream equipment is already automating the take-off, for example on-line gauging or IBC (internal bubble cooling) control.

Weight per Length (lb/ft, g./ft, g/m, Kg/m)

Model XC-2X Control via Extruder Drive

XC-2X weight per length control via extruder drive. XC-2X is ideal to control the output of an extruder or starve feeder. Typical application is to control Weight per Length (lb/ft, g./ft, g/m, Kg/m) where other downstream equipment may already be automating the take-off, for example, online gauging or IBC (internal bubble cooling) control.

XC-2T Control via Take-Off Drive

XC-2T is most commonly selected for mono-layer lines. The line speed is determined by the digital encoder mounted on any rotating shaft or roll of the Take-Off. Using the throughput information (lb/hr or Kg/h) from the extruder, the actual weight per length of the product is calculated in grams/m. The control of the Take-Off drive, which often has a much finer resolution than that of an extrusion drive, is then maintained automatically, adjusting the speed of the line up or down in relation to extrusion output.

Calculated Gauge Control (Mil or Micron) MODEL

XC-3

– Weight per Length Control
(lb/ft, g./ft, g/m, Kg/m)

– Calculated Gauge Control (mil., micron)
of both Extruder and Take-Off Drives

XC-3 can be used on mono-layer lines where a user wishes to automatically control both the extruder output and the take-off line speed. XC-3 is for use on multi-layer, co-extrusion lines. XC-3 operates on the main layer – the master layer of the co-extrusion line, and controls both the speed of the extruder drive and speed of the take-off. The side layers, or slave layers, are controlled by an XC-1 throughput control on each layer. To coordinate the layers and total line output a Touch Screen Panel PC is used with the XC software to accurately coordinate the throughputs to each layer and maintain correct line speed. Control can be managed by either weight per length (lb/ft, g./ft, g/m, Kg/m) or calculated gauge control (Micron or Mil.).

LineMaster Hardware



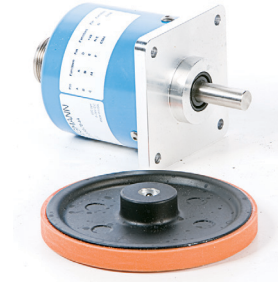
LIW Loss-in-Weight Hopper

The LineMaster LIW hopper monitors the loss in weight of material as it flows into the extrusion line. Actual throughput is monitored and updated every 1 second.



XC Drive Control Package

The XC Drive Control Package provides the interface between the LineMaster controller and either extruder drive, take-off drive, or both.



Digital Encoder

A Digital Encoder is supplied where line speed needs to be determined. This accurately monitors the line speed to calculate weight per length and/or gauge.

LineMaster Networking Software

For Model XC-1 and XC-2

Novatec G2 networking software can be connected to LineMaster to remotely control performance of production lines for XC-1 and XC-2 applications. Material consumption reports are easily generated.

- G2 Software is sold as 1 license per each LIW hopper. The program is typically installed and run from a touch screen computer that is mounted in or around the central control panel of the extrusion line. Novatec can supply the touch screen computer or it can be sourced locally.
- The G2 software can also integrate and control Novatec WSB Gravimetric Blenders, which are often utilized to dose and mix blends of materials to LineMaster.
- The software is fully networkable, allowing access to reports and controls remotely from any other PC on the same network.

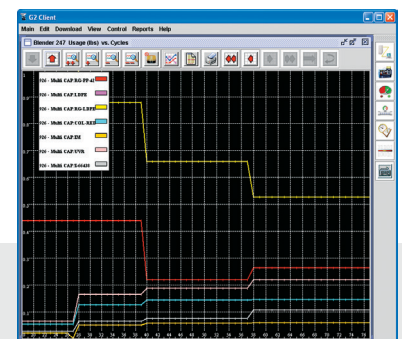
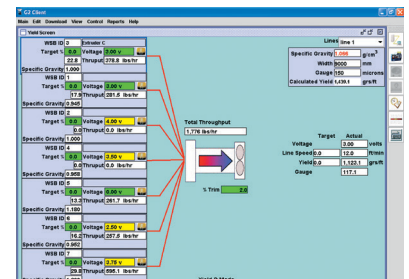
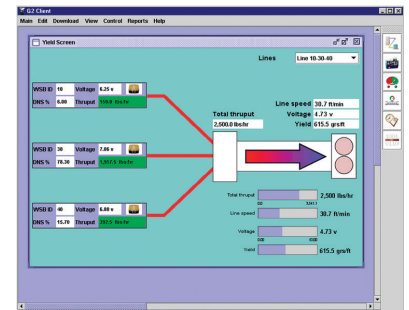
For Model XC-3

The G2 software program is an integral part of the XC-3 extrusion multi-layer line.

- Control throughput and yield
- Monitor and control up to 7 layers; each layer is graphically depicted (see screen shot). All lines visually merge where the Total Throughput is displayed. Take-off and downstream controls are displayed at the right showing line speed, weight per length and/or gauge.

A more detailed examination of each blender's settings and output can be accessed through the Line Blender Screen by clicking on the individual extruder icon.

- The software also allows reporting on average throughput, total throughput, and the percentage of total uptime of an individual blender or all blenders on the line. Reports are based on start/stop date and time, weight units and percentage of run time.



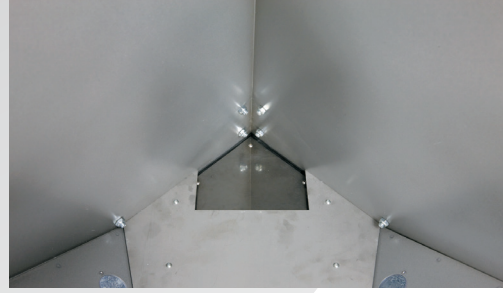
Blender & Feeder Options

Dispense Device Selection

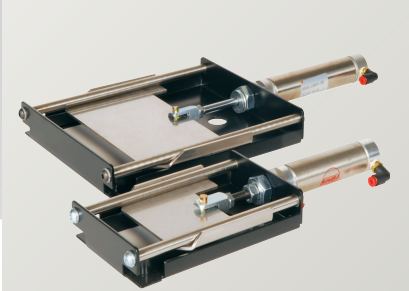
WSBs utilize many different types of dispense devices to accurately meter a variety of materials. The selection of a dispense device depends on 3 factors: size of the blender, volume of dispense and material flow characteristics.



Pivot Valve
Vertical valve for small hoppers.



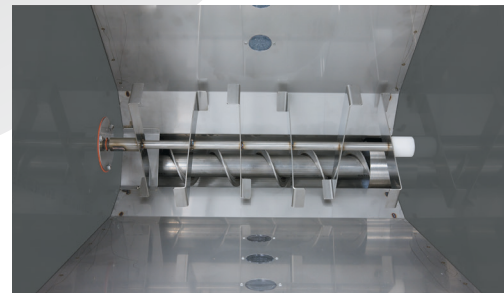
Corner Valve
For poorly flowing regrind or high volume pellets



Slide Gates
Standard dispense device for free-flowing materials.

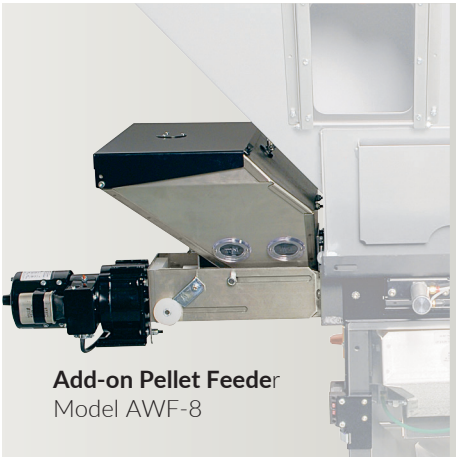


MicroPulse Valve
Vertical valve for low dosing (10 gm or less).

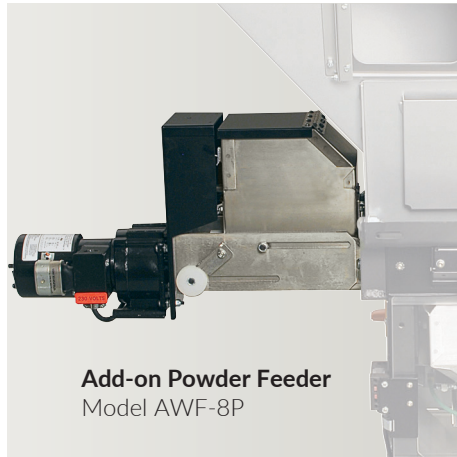


Wood Flour / Powder Feeder
For low bulk density powders

Add-On Feeder Options



Add-on Pellet Feeder
Model AWF-8



Add-on Powder Feeder
Model AWF-8P



Loader Support Assembly
Model asrh



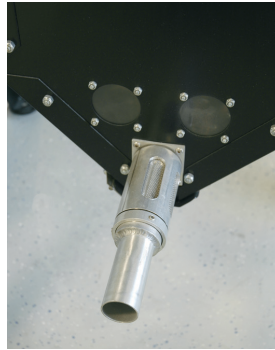
Add-on Liquid Color Feeder
Model AWL

Accessories

Vacuum Take-off Stands



WSB-140R
on VTA stand



Probe
For vacuum take-off stand



AWS Barrel or Gaylord Style Stands



VTA Stands

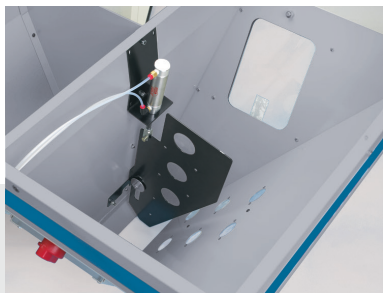
Hopper Extensions



Hopper Extension Model WRR-4W
Shown on WSB-440

Hopper extensions are available when additional hopper capacity is required for series WSB-100 through WSB-3000.

The flared design greatly increases hopper capacities. Straight sides are also available.



Bridge Breaker Model WBB



Low Level Alarms
Model LLA-6

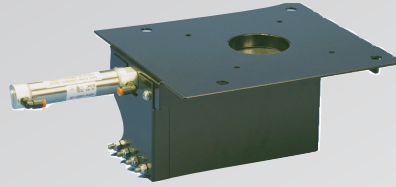


ML Series Venturi Loader
For removable hoppers or
feeders. Model ML-1

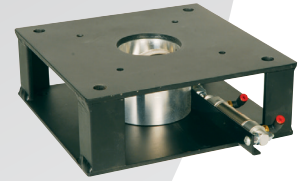
Accessories



Drain Ports
Model HSG



Flow Control Assembly
Model FCA



Butterfly Flow Control Assembly
Model FCA-B



Magnet Drawers



GVL - GlassVu Loader
Model GVL-10



Removable Hopper
Model as543

Control Cable Kits



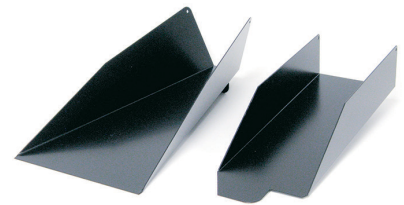
Standard Controller Remote Kit
Model AEK



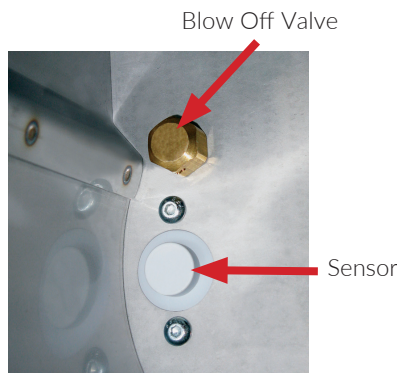
TouchScreen Controller Remote Kit
Model AEK-T



Self Draining Mix Chambers
Model KIT-019



Drain Chutes
Model 572



Sensor Blow Off
Model KIT-021



ClearVu Surge Hopper
Model MCSH

Also available:

- High Temperature Kit
- Remote Alarm Output
- Dual Level Sensor
- Mix Motor Failure Alarm
- Automated Re grind % Adjustment

Model	Max Throughput	Components	Side Gates	Feeders	Throughput Capacity	Overall Dimensions L x W x H (approx.)	Blender Wgt (approx.)				
WSB-MB Micro	0.9 lb	4	4	0	up to 100 lb/hr or 45 Kg/hr	16.5 x 16.5 x 23.3 in 42 x 42 x 59 cm	50 lb/23 Kg				
WSB-140MP Micro-Plus	2.2 lb	4	4	0	up to 350 lb/hr or 160 Kg/hr	30.1 x 27.9 x 32.3 in 76 x 71 x 82 cm	150 lb/68 Kg				
WSB-140 WSB-140R WSB-160	2.2 lb	4 4 6	4 4 6	0 0 0	up to 450 lb/hr or 200 Kg/hr	31.4 x 31.2 x 41 in 80 x 80 x 104 cm	150 lb/68 Kg				
WSB-220 WSB-221 WSB-222	4.4 lb	2 3 4	2 2 2	0 1 2	up to 900 lb/hr or 400 Kg/hr	32.5 x 26.5 x 42 in 83 x 67 x 107 cm	220 lb/100 Kg 260 lb/118 Kg 300 lb/140 Kg				
WSB-240 WSB-241 WSB-242 WSB-240R WSB-260		4 5 6 4 6	4 4 4 4 6	0 1 2 0 0			230 lb/105 Kg 270 lb/123 Kg 310 lb/141 Kg 255 lb/116 Kg 260 lb/120 Kg				
WSB-420 WSB-421 WSB-422		2 3 4	2 2 2	0 1 2			up to 1450 lb/hr or 650 Kg/hr	32.5 x 26.5 x 48 in 83 x 67 x 122 cm	275 lb/125 Kg 315 lb/143 Kg 355 lb/161 Kg		
WSB-440 WSB-441 WSB-442 WSB-444 WSB-440R WSB-460		4 5 6 8 4 6	4 4 4 4 4 6	0 1 2 4 0 0					310 lb/141 Kg 350 lb/159 Kg 390 lb/177 Kg 470 lb/214 Kg 345 lb/157 Kg 355 lb/161 Kg		
WSB-940 WSB-941 WSB-942 WSB-944 WSB-960		4 5 6 8 6	4 4 4 4 6	0 1 2 4 0					up to 4000 lb/hr or 1800 Kg/hr	46.5 x 28.5 x 60 in 118 x 72 x 152 cm	420 lb/191 Kg 460 lb/209 Kg 500 lb/227 Kg 580 lb/264 Kg 430 lb/195 Kg
WSB-1840 WSB-1841 WSB-1842 WSB-1860 WSB-1866		4 5 6 6 12	4 4 4 6 6	0 1 2 0 6					up to 5000 lb/hr or 2300 Kg/hr	46.5 x 40.5 x 87 in 118 x 103 x 221 cm	615 lb/280 Kg 655 lb/298 Kg 695 lb/316 Kg 625 lb/284 Kg 865 lb/393 Kg
WSB-2400		2200-6600 lb/hr	12	Inquire					2", 3", 4"		
WSB-3020 WSB-3040 WSB-3043 WSB-3045	6800-8500 lb/hr	2 Materials High Vol. Extrusion 4 Materials High Vol. Extrusion 7 Materials Compounding 9 Materials Wood Composites	N/A	As Required	up to 8000 lb/hr or 3600 Kg/hr up to 5950 lb/hr or 2700 Kg/hr Up to 4850 lb/hr or 2200 Kg/hr up to 2200 lb/hr or 1000 Kg/hr	50 x 43 x 99 127 x 109 x 252 cm (depending on hopper configuration)			Contact Novatec		

Specification Chart 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 ft³/hr
- Voltage: 120V 60Hz, 230V 50/60Hz
Exception: WSB-3000 models 230V 3Ph 60Hz, 480V 3Ph 60 Hz, 400V 3Ph 50Hz
- Contact NOVATEC to determine actual throughput for your application based on resin type and bulk density

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