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BD SERIES BATCH WEIGH BLENDERS

The AEC BD Series batch weigh blenders are setting new industry standards for accuracy and homogeneous blend quality with quick-acting diamond slide gates, unique mix chambers, and an easy to use touch-screen interface with 3 modes of recipe entry:

EZ mode (factory default): color and additives metered as a percentage of the virgin material. (1/2% - 100% range, depending on material) Percentage mode: all ingredients metered as a percentage of the overall batch. (1/2% to 100%, range depending on material)
Parts mode: (ratio, i.e. 500:1)

BD 2500 Blender

STANDARD FEATURES

- Allen-Bradley PLC-based control system with PanelView touch-screen interface and 8' (3 m) cable, serial printer port, (optional Ethernet port available), 20 recipe storage book, alarm light, audible alarm, and 3 modes of recipe entry

- Powder coated, mild steel material supply hoppers with machined polycarbonate access doors (stainless steel on BD-150)

- Heavy-duty diamond metering gate assemblies (except BD-150)

- Square gate supplied on component #3 regrind on BD-500 and BD-900 and components #1 and #3 on BD-4000 and BD-6000

- Adjustable stroke limiters for all ingredients (not available with BD-150)

- Precision 0.02% span accurate cantilever load cell weigh system

- Removable, stainless steel weigh hopper

- Efficient mix chamber design

- Removable stainless steel mixer agitator

- Stainless steel mixer drawer assembly, bolted in place on BD-4000 and BD-6000 models. Integrated stainless steel mixer bowl on BD-150

- Interlocked safety system shuts off air and electricity if mix chamber is opened

- "H" models include two large hoppers with diamond gates and two removable hoppers with vertical gates

- Supply hopper lids for AEC SRC02-16, SRC30/60 (BD-2500 and larger), AVL Venturi Loader (additives only) or blank lids. Lids may also be cut for non-AEC receivers at no additional charge, provided detailed drawings are received with order

- 5th and 6th components include horizontal gates

- 7th and 8th components include additive feeders

- 115/1/50 or 60 and 220/1/50 or 60 supply voltage

OPTIONAL FEATURES

- Low-level solid-state proximity sensor for each supply hopper (alarm functions and indicators are included in the PLC Controller)

- Regrind Auger Metering (RAM) assembly with agitated straight wall hopper, including interlocked access door (not available with BD-150 or BD-500) - add "R" to the end of the model number

- Stainless steel supply hoppers (Allow additional lead time)

- Additional drop-in hoppers with blank hand fill lids (BD-150, BD-500, and BD-900 only)

- Blender stands with slide gates

- Vacuum take-off boxes mounted below surge hopper under floor stands

- Aluminum spool (premium mounting flange) with drain port (8"x8"/200mm square)

- Low-profile drawer-magnet (3 bar)

- Drain tube with slide gate in supply hopper

- Customer-specified (special) mounting hole pattern - drawing required with order

Note: Compressed air loaders cannot be used to load BD-150

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SPECIFICATIONS

	BD-150	BD-500	BD-900	BD-2500	BD-4000	BD-6000
Max. Blending Rate, lbs./hr (kg/hr)	150 (68)	500 (227)	900 (410)	2500 (1135)	4000 (1815)	6000 (2725)
# of materials to be blended	2-4	2-6	2-8			
Slide Gate Size, Majors, in. (mm)	2.0 (50)	2.0 (50)		2.5 (63)	3.0 (76)	
Slide Gate Size, Minors, in. (mm)	1.5 (38)	1.5 (38)		2.0 (50)	3.0 (76)	
Supply Hopper Capacity, Majors, cu. ft. (l)[4]	0.7 (20)	1.4 (40)		3.0 (85)	7.5 (212)	
Supply Hopper Capacity, Minors, cu. ft. (l)[4]	0.2 (5)	1.0 (28)		2.7 (77)	6.0 (170)	
Weigh hopper cap. cu. ft. (l)	0.07 (20)	0.18 (50)	0.38 (11)	0.82 (23)	1.23 (34)	2.17 (61)
Typical batch size, lbs. (kg)	1.5 (0.7)	4 (1.8)	8 (3.6)	25 (11.3)	35 (15.8)	45 (20.4)
Mixer cap., cu. ft. (l)	0.18 (5)	0.25 (7)	0.56 (16)	1.1 (31)	2.72 (77)	
Mixer motor size, HP (kW)	1/8 (0.09)	1/6 (0.124)		1/2 (0.373)		
Mixer rpm	42	21		22		
Load cell capacity, kg	1 @ 5 kg	2 @ 3 kg	2 @ 5 kg	2 @ 10 kg	2 @ 15 kg	2 @ 20 kg
Discharge opening, in. (mm)	2.5 (63)	3.0 (76.2)		4.0 (102)		
Machine weight, lbs. (kg)	250 (115)	375 (170)	450 (205)	650 (295)	1100 (500)	
Shipping weight, lbs. (kg)	350 (160)	425 (190)	550 (250)	800 (360)	1300 (590)	
Height, in. (mm)	34.5 (875)	51.5 (1308)	56.5 (1435)	69.5 (1765)	85.5 (2172)	89.5 (2337)
Width, in. (mm)	26.0 (650)	37.5 (952)	37.0 (940)	45.5 (1156)	57.5 (1461)	57.5 (1461)
Depth, in. (mm)	22.0 (560)	37.0 (940)	40.0 (1016)	46.5 (1181)	57.0 (1448)	

1 BD blender models with "H" designation include two removable hoppers with integral gates
2 BD blender models with 7 or 8 components include additive feeders for the 7th and 8th component metering and A-B 10" color touch-screen
3 See below for important rate information concerning each model's maximum blending rate
4 Hopper capacity measured excludes straight wall section and is based on vacuum receiver use. Approximate value.

IMPORTANT INFORMATION CONCERNING MAX. BLENDING RATE LISTED

Standard maximum blending rate is based on a 3-component blend running 80% virgin, 18% regrind (free-flowing) and 2% pelletized color. Additional components reduce max rate by approximately 20% each.

Recipes with more than 50% regrind will significantly reduce the throughput and minor ingredient accuracy of the blender.

Two component recipes may REDUCE overall belnder throughput due to reducded available weith hopper capacity. Consult the factory for achieveable rates.

Rates are based on dry, free-flowing virgin pellets with a bulk density of 35 lbs./cu. ft. (560 m^3). Rates will vary as a result of the number of blender components, the materials, and the recipe(s) used. Consult the factory for guaranteed rates.

Material samples are required for testing prior to shipment for guaranteed rates. Consult the AEC Sales Department for shipping instructions and for the amounts of each material to send for testing. A test request form must be submitted, and typical amounts of material required for small blenders are 50 lbs. (23kg) for major ingredients and 10 lbs. (4.5 kg). for minor ingredients.

OPTIONAL BLENDER STANDS

Heavy-duty blender stands feature heavy-duty cast aluminum pneumatic slide gate and valve. BD-150 and 500 models should use 30" wide stands; larger blenders should use 56" wide stands.

Regular-Duty floor stands are also available with regular-duty pneumatic slide gate, controls, and 2.0 or 3.5 cu.ft. surge hopper.

Both styles of stands are available in drum fill, gaylord fill, and floor stand configurations.

Light-duty casters are available (Not for use on 56" wide heavy-duty stands)

Cast aluminum pneumatic slide gate with controls is required to ensure homogenous mixing prior to discharge, particularly at startup for customer-supplied stands or other special configurations

ELECTRICAL OPTIONS

- External audible and visual alarm for remote mounting
- PanelView 1000 (10" color touch-screen) in lieu of standard PanelView 550
- Additional touch-screen interface for remote control of blender, with 8 ft. (2.4 m) cable
- 50 ft. (15 m) cable in lieu of 8 ft.
- Parallel printer adapter and 6 ft. (1.8 m) cable
- Ethernet module for remote communication
- 220/1/50 or 60 operation (includes CE compliance) - 24 volt controls and 220 volt mixer motor
- A3 communication software for unlimited number of new A-B controlled blenders
- Panasonic color touch-screen in lieu of standard PanelView 550 that can control up to an 8-component blender
- Siemens control to replace entire Allen-Bradley system with optional Profibus DP Slave communications
- Modbus Plus communications option available

Specifications, appearances and dimensions are subject to change without notice.

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INTEGRATED BLENDING CONTROL SYSTEM
OFF-THE-SHELF CONTROL WITH PROVEN RELIABILITY
USER-FRIENDLY, MENU DRIVEN INTERFACE

AEC's new Allen-Bradley PLC-based blender controller provides state-of-the-art process control right at your fingertips. Operator-friendly controls simplify operation, store up to 20 recipes and provide unmatched metering accuracy for up to six ingredients, especially below 2%. The PanelView touch-screen interface displays user-friendly, menu-driven interface screens for complete control and monitoring of any batch blending operation. A serial printer port is included and an optional Ethernet port is available.

FEATURES

• Patented Control System

• Touch-screen interface in a remote-mount NEMA 12 (IP 54) enclosure

• Two screens allow total control and monitoring of the blending process

• Constant display of actual material used

• Load cell signal conditioning technology improves reliability and is unaffected by electrical noise

• Redesigned pneumatic and electrical systems improve metering accuracy and blender rate

• Electrical panel meets applicable specifications, with 220 volt operation and CE declaration available

• Integral alarm light and horn indicates material feed problems

• Ethernet module available for online monitoring, control, and remote troubleshooting

• Three types of recipe entry formats are available to the operator:

   • "EZ" mode meters color and additives as a percentage of the virgin material (most common in injection molding)
   • "Percentage" mode meters all ingredients as a percentage of the overall batch (most common in extrusion and blow molding)
   • "Parts" mode allows for ratio recipe entry (e.g., 50:1)

Programmable entry screens
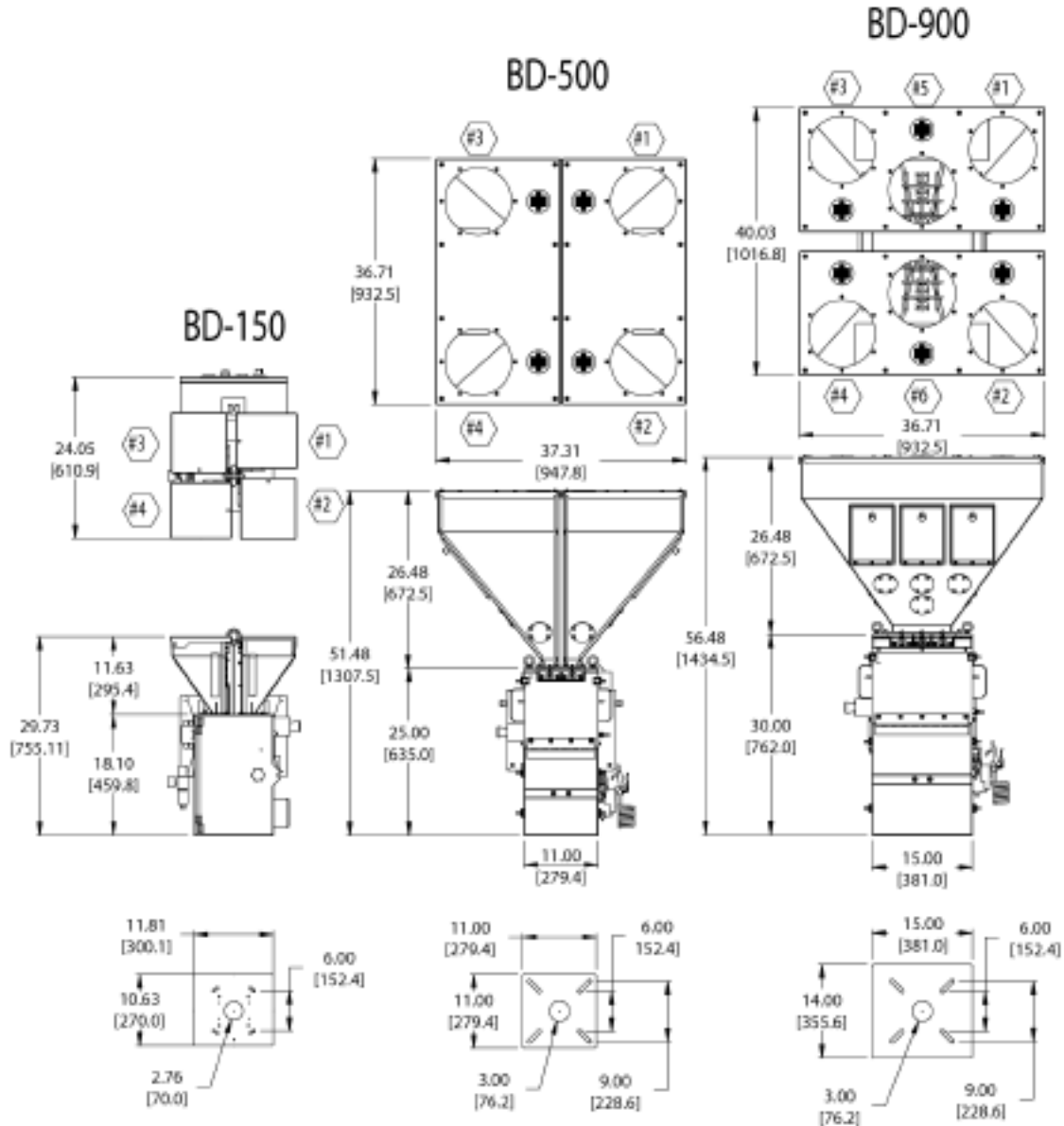for all three recipe modes
(up to six components)

Real time display of process
rate and material usage of
each ingredient

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DIMENSIONS

BD-900

BD-500

BD-150

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DIMENSIONS

BD-2500

BD-4000

BD-6000

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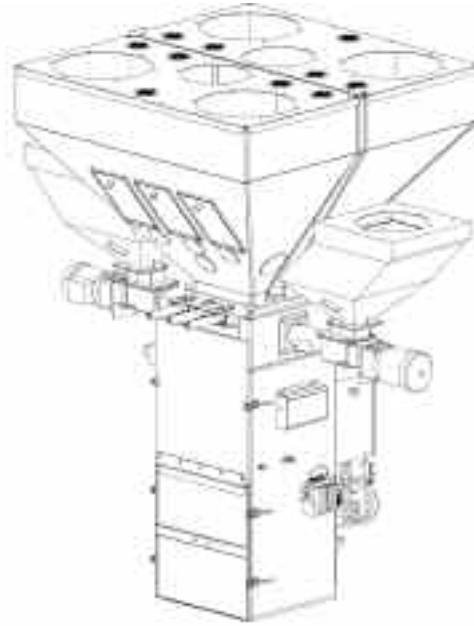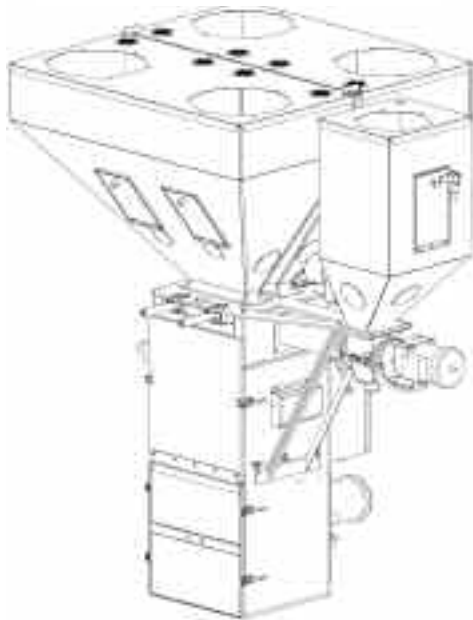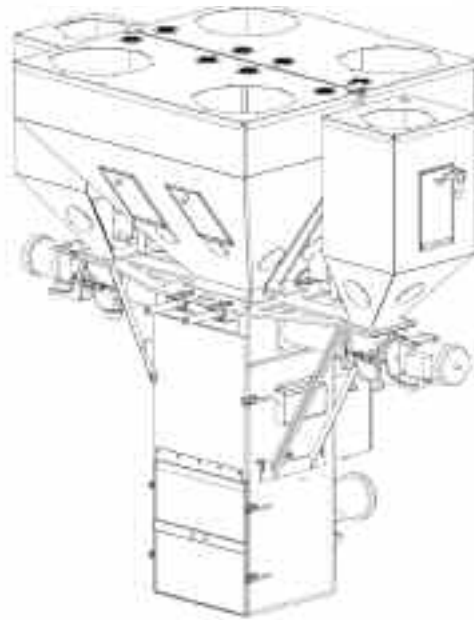
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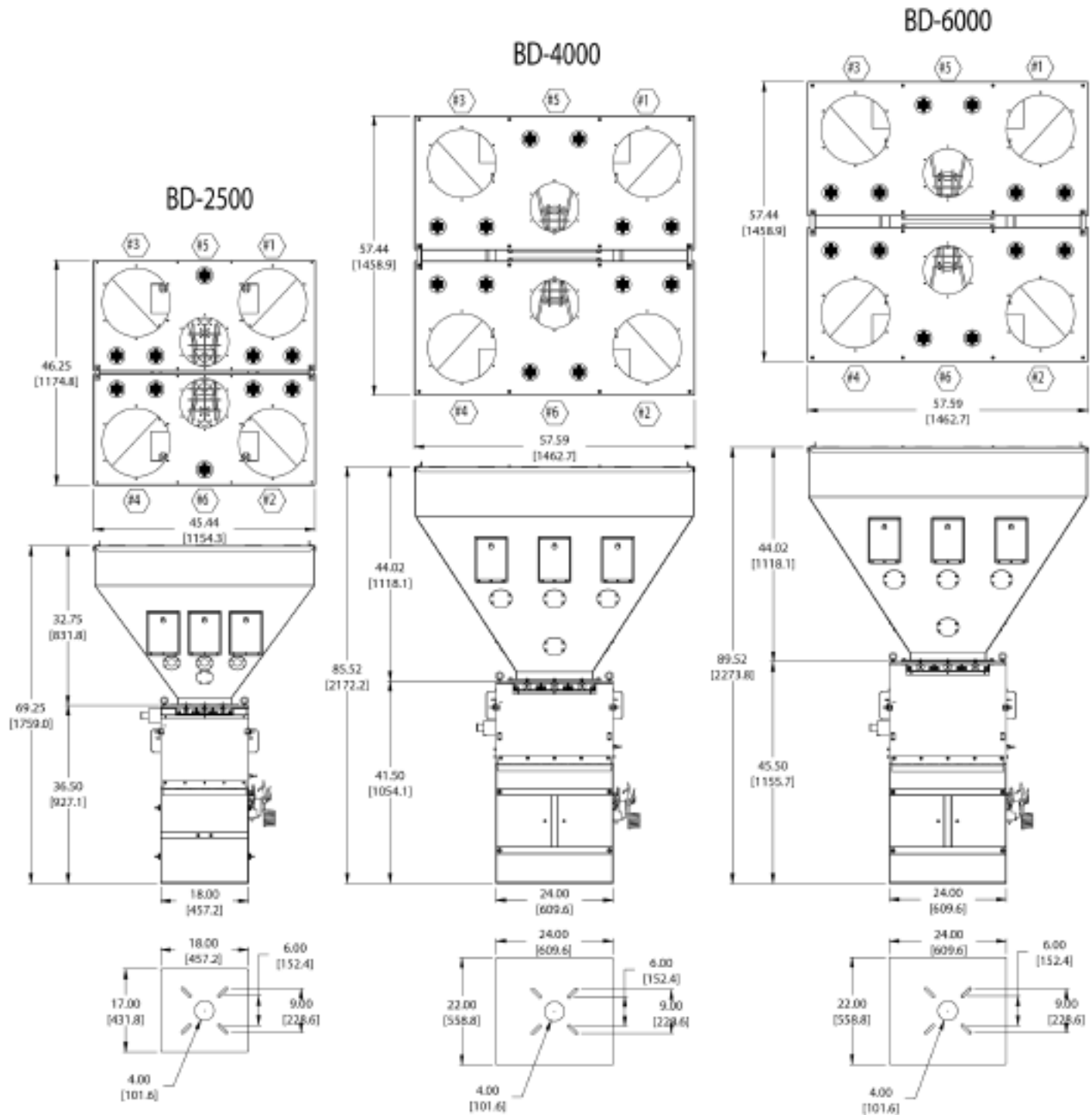
DIMENSIONS
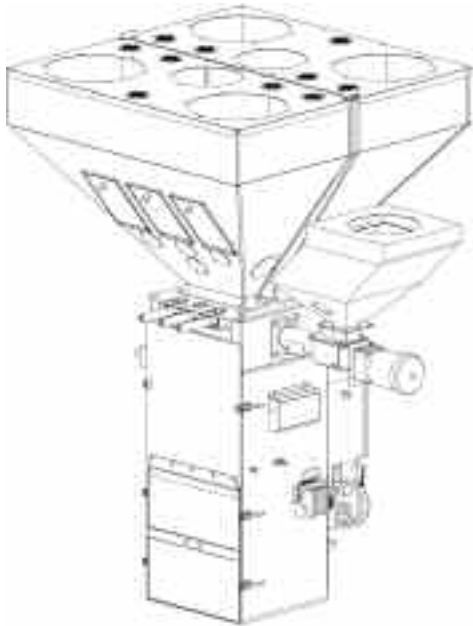
BD-2500-7F
Includes:
6 Slidegates, 1 Additive Feeder

BD-2500-8FF
Includes:
6 Slidegates, 2 Additive Feeders
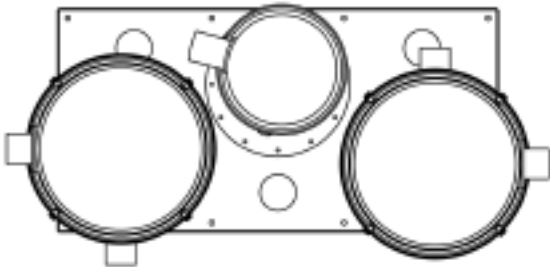

BD-2500-5R
Includes:
4 Slidegates, 1 R.A.M. Hopper

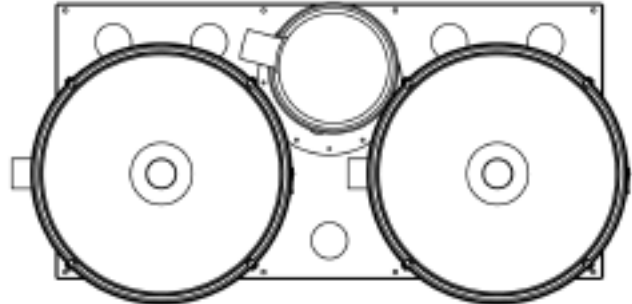**BD-2500-6RR**
Includes:
4 Slidegates, 2 R.A.M. Hoppers

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COVER LAYOUT SPECIFICATIONS

BD-500/900
SRX-16, QTY 2
SRX-04, QTY 1

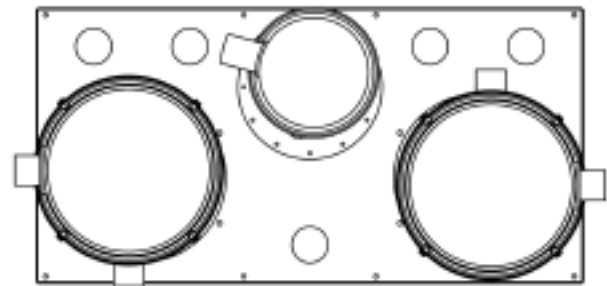**BD-150-4M**
SRX-16, QTY 2
SRX-04, QTY 2

BD-150-4H
SRX-16, QTY 2

BD-150-4S
MANUAL FILL ONLY

BD-2500
SRX-60, QTY 2
SRX-04, QTY 1

BD-2500
SRX-16, QTY 2
SRX-04, QTY 1

2.OCU.FT RAM HOPPER
SRX-16

MAXIMUM LOADER DIAMETER
SRX-30/60: 24"DIA
SRX-08/16: 16"DIA
SRX-01/02/04: 11"DIA
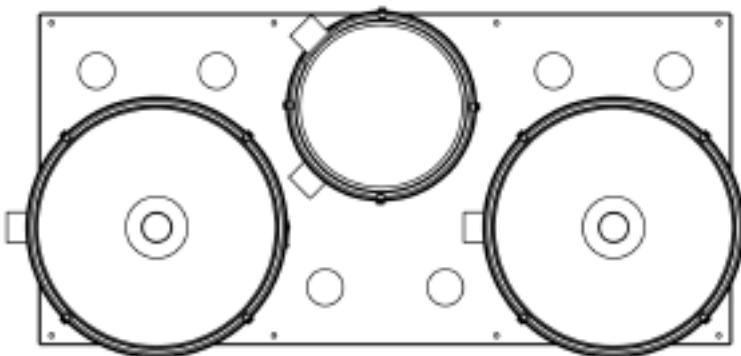
BD-4000/6000
SRX-60, QTY 2
SRX-16, QTY 1

7.0 CU.FT RAM HOPPER
SRX-60

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NOTES: