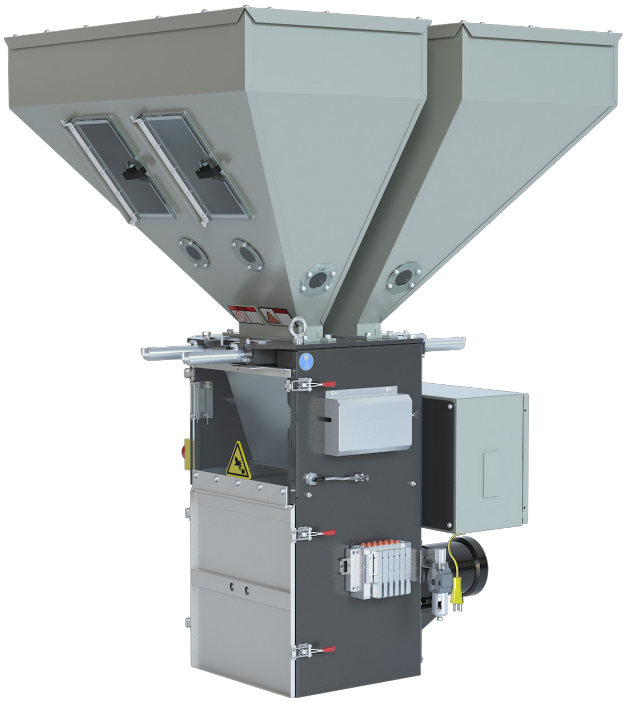
BD SERIES
Gravimetric Blender



Technical Specifications

The BD Series batch weigh blenders are setting new industry standards for accuracy and homogeneous blend quality with quick-acting diamond slide gates, unmatched mixing performance, and an easy to use high resolution color touchscreen interface.

With 3 different ways to enter blend recipes, the BD Series blender is perfect for Injection Molding, Extrusion, Blow Molding or any other process. Combined with its easy to clean design, the BD series blender allows you to minimize material changes and maximize machine efficiency.

Features

Standard Features

- 7" High Resolution Color Touchscreen display and a powerful Allen Bradley Micro850 PLC.
- Unmatched mixing performance - new high efficiency paddle delivers the most consistent batch-to-batch mix in the industry.
- 100 recipe storage book
- Alarm light & audible alarm
- 3 Recipe Modes

  1. Percentage recipe entry - Ingredients metered as a percentage of the batch.

  2. 8-component "EZ" mode recipe entry - Color and additives metered as a percentage of the virgin.

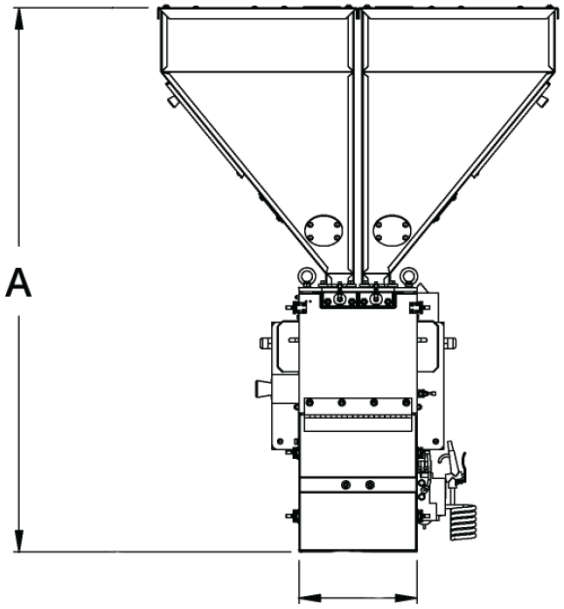
  3. "Parts" mode ratio recipe entry (i.e. 500:1)

- Precision metering with diamond slide gate design - dispense as few as 5 pellets per pulse
- Oversized square gate assembly for Regrind
- Precision 0.02% span accurate cantilever load cell weigh system
- Adjustable stroke limiters for all ingredients
- Interlocked safety system shuts off air and power if mix chamber is opened
- 7th and 8th components include additive feeders or RAM feeders
- 115/1/60 or 230/1/60 supply voltage
- Remotely monitor or control via phone, tablet, or PC
- Seamlessly integrate with any smart factory
- E-mail alert capability

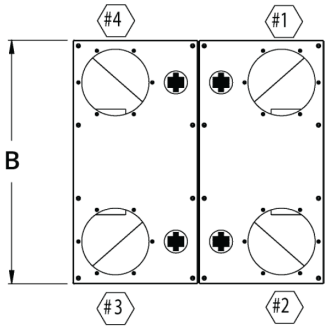
Optional Features

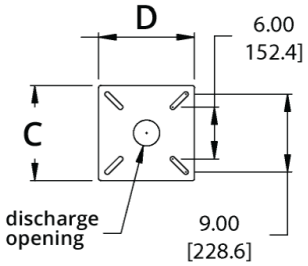
- 10" Color HMI touch screen upgrade in lieu of standard 7"
- Integrated 9-station loading control
- Low-level proximity sensor for each supply hopper
- Regrind Auger Metering (RAM) assembly with agitated straight wall hopper (model 900 and larger)
- Stainless steel supply hoppers
- Blender stands with air operated mixer discharge knife gate for gaylord or barrel filling
- Low-profile blender stand for mezzanine mounting
- Low-profile drawer-magnet
- Blender stand with mixer valve and surge hopper with integral take off stub or vacuum take off box mounting
- Aluminum spool with drain port
- Drain tube with slide gate on supply hopper
- Ethernet switch for remote communications

Product Diagrams



Model	A, in. (mm.)	B, in. (mm.)	C, D, in. (mm.)	Weight
500	51.5 (1308)	37.5 (952)	11x11 (280x280)	375 (170)
900	56.5 (1435)	37.0 (940)	14x15 (355x457)	450 (205)
2500	69.5 (1765)	45.5 (1156)	17x18 (432x453)	650 (295)
4000	85.5 (2172)	57.5 (1461)	22x24 (559x610)	1100 (500)
6000	89.5 (2337)			





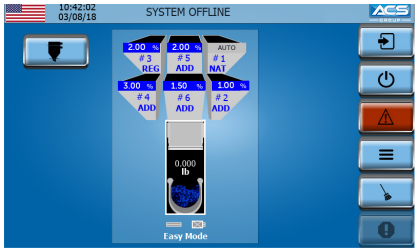
Specifications

Model	Max. Blending Rate* lbs./hr. (kgs./hr.)	# of materials to be blended	Slide gate size, in. (mm.)		Supply hopper capacity		Weigh hopper cap., cu.ft (l)
			Majors	Minors	Majors	Minors	
500	500 (227)	2-6	2.0 (50)	1.5 (38)	1.4 (40)	1.0 (28)	0.18 (5.0)
900	900 (410)	2-8					0.38 (11)
2500	2500 (1135)		2.5 (63)	2.0 (50)	3.0 (85)	2.7 (77)	0.82 (23)
4000	4000 (1815)		4.0 (100)	3.0 (75)	7.5 (212)	6.0 (170)	1.23 (34)
6000	6000 (2725)						2.17 (61)

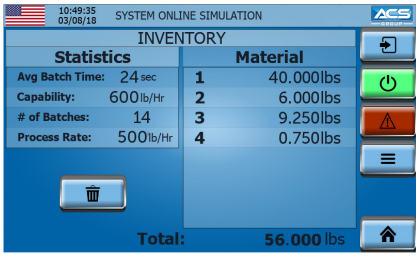
* Maximum blending rates based on running three components at 80% virgin pellets, 18% free-flowing regrind and 2% pelletized additive

Model	Typical batch size lbs. (kgs.)	Mixer			Load cell capacity kgs.	Discharge opening in. (mm.)
		Capacity cu.ft. (l)	Motor size HP (kW)	RPM		
500	4 (1.8)	0.25 (7)	1/6 (0.124)	21	2 @ 10 kgs.	3.0 (76.2)
900	8 (3.6)	0.56 (16)			2 @ 10 kgs.	
2500	25 (11.3)	1.1 (31)	1/3 (0.25)	22	2 @ 10 kgs.	4.0 (102)
4000	35 (15.8)	2.72 (77)	1 (0.75)		2 @ 15 kgs.	
6000	45 (20.4)				2 @ 15 kgs.	

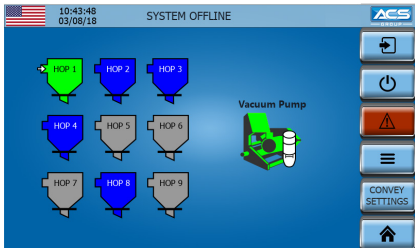
Advanced Controls



Blender Home Screen
Visual representation of the entire blender system to quickly and easily see the current recipe, operation mode, and the weight of the current batch.



Inventory Statistics
Quickly see the average batch time and current pounds per hour process rate to identify throughput targets.



9 Station Loading Control (Optional)
Control a vacuum pump to load up to 8 hoppers and convey to a single process machine.

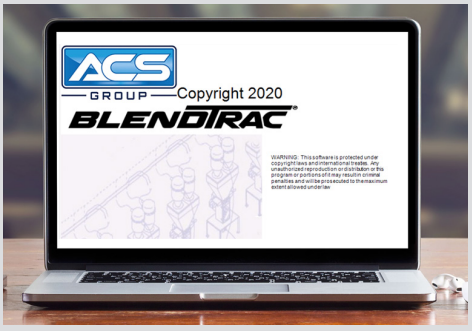
Recipe Book
Enter and store up to 100 unique recipes.

Available Options

BlendTrac® Software

BlendTrac® Software collects useful data to help your factory use raw materials in a smarter way. This powerful software is used to centralize inventory control, optimize quality and reduce labor and material costs.

- Centralize Inventory Control
- Optimize Quality
- Save Labor & Material Costs



Optimize With MiVue®

MiVue - and Industrial IoT service for Manufacturers. Optimize your entire Manufacturing facility. MiVue technology was designed with the manufacturer in mind. Because time-to-value, security and ease of use are very important to manufacturers we built a platform that will give you confidence to start and stay on your Industry 4.0 journey.

- Improve Uptime
- Reduce Operational Costs
- Enhanced Service & Maintenance

BD Series

Gravimetric Batch Blender

APPROXIMATE MAX BLENDING RATE (LB/HR)

Use for reference only! To determine actual throughputs, contact engineering with actual recipe!

Model	# Components					
	3	4	5	6	7	8
500	500	400	320	250	200	160
900	900	720	570	450	360	280
2500	2500	2000	1600	1280	1020	810
4000	4000	3200	2560	2040	1630	1300
6000	6000	4800	3840	3070	2450	1960

IMPORTANT INFORMATION CONCERNING MAX. BLENDING RATE LISTED:

- The standard maximum blending rate is based on a 3-component blend running 80% virgin, 18% regrind (free-flowing) and 2% pelletized color. Each additional component reduces the overall maximum rate by 20% per component.
- Recipes with more than 50% regrind will significantly reduce the throughput, and minor ingredient accuracy, of the blender. Consult the factory for achievable rates.
- Two component recipes may REDUCE overall blenders throughput due to reduced available with hopper capacity. Consult the factory for achievable rates.
- Rates are based on dry, free-flowing virgin pellets with a bulk density of 35 lbs./ft3. 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 ACS 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. for major ingredients and 10 lbs. for minor ingredients

MAXIMUM LOADER SIZING

(Recommended MAXIMUM loader sizing - smaller models can be used in all locations.)

Model	Comp #1	Comp #2	Comp #3	Comp #4	Comp #5	Comp #6	RAM	AF
500	SRC-16 (SSR-45)				SRC-04 (SSR-11)		N/A	N/A
900	SRC-16 (SSR-45)				SRC-04 (SSR-11)		SRC-16 (SSR-45)	
2500	SRC-60 (SSR-170)				SRC-04 (SSR-11)		SRC-16 (SSR-45)	
	SRC-16 (SSR-45)						SRC-16 (SSR-45)	
4000	SRC-60 (SSR-170)				SRC-16 (SSR-45)		SRC-60 (SSR-170)	SRC-16 (SSR-45)
6000	SRC-60 (SSR-170)				SRC-16 (SSR-45)		SRC-60 (SSR-170)	SRC-16 (SSR-45)

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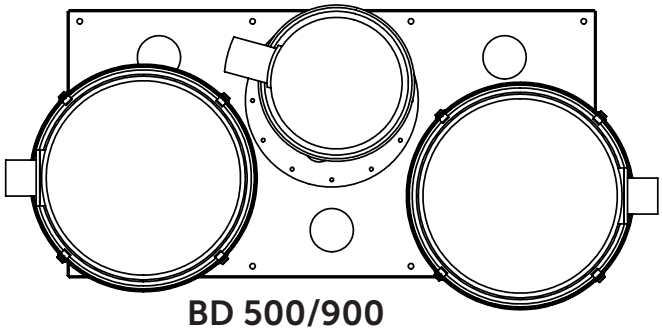
BD Series

Gravimetric Batch Blender

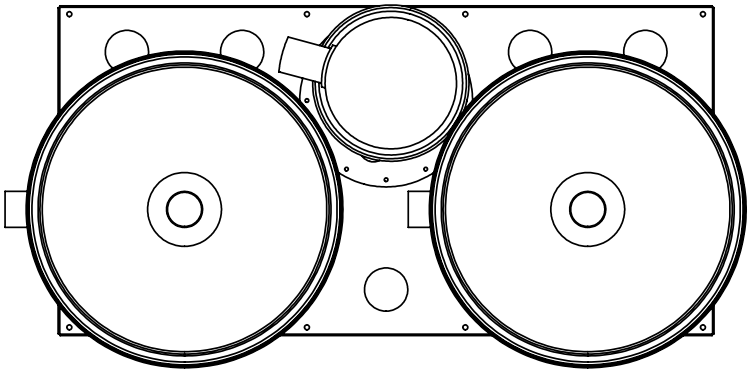
BLENDER COVER LAYOUT



BD 500/900

SRC16; SSR45, QTY: 2

SRC04; SSR11, QTY: 1

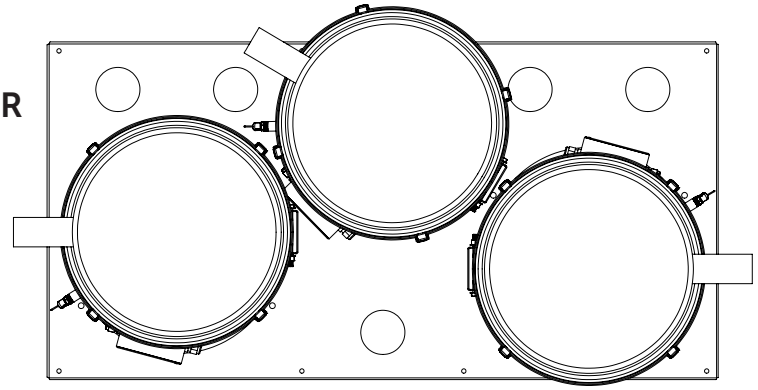


BD 2500

SRC60; SSR170, QTY: 2

SRC04; SSR11, QTY: 1

OR

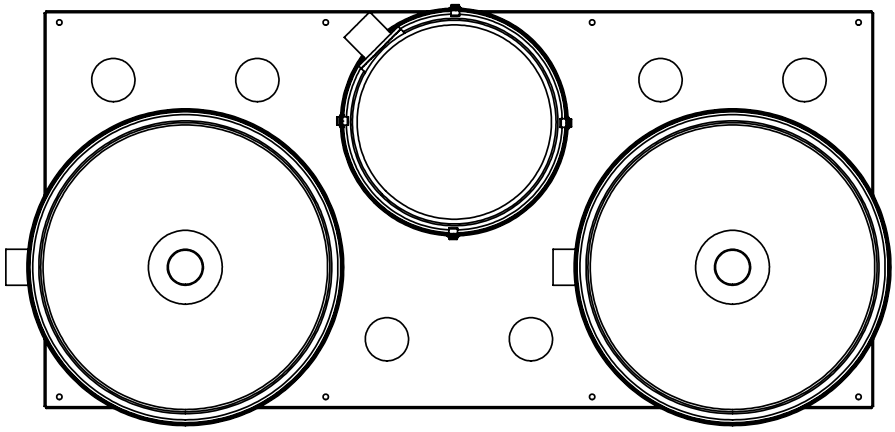


BD 2500

SRC16; SSR45, QTY: 3

2.0 cu.ft. RAM Hopper

SRC16; SSR45



BD 4000/6000

SRC60; SSR170, QTY: 2

SRC16; SSR45, QTY: 1

7.0 cu.ft. RAM Hopper

SRC60; SSR170

AF HOPPER

SRC16; SSR45, QTY: 1

(not pictured)

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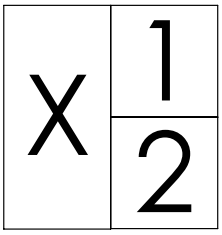
BD Series

Gravimetric Batch Blender

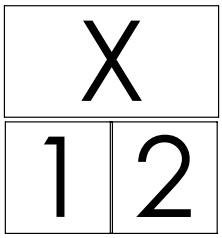
STANDARD SLIDE GATE CONFIGURATIONS

REAR CONTROL



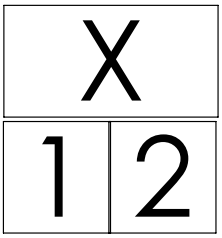
2-COMP MODEL

REAR CONTROL



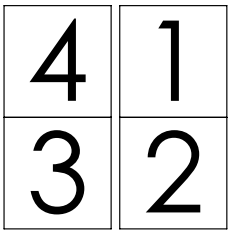
2-COMP MODEL

REAR CONTROL



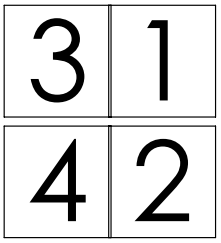
2-COMP MODEL

REAR CONTROL



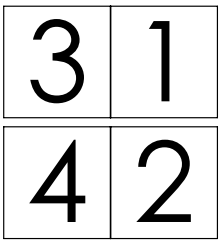
4-COMP MODEL

REAR CONTROL



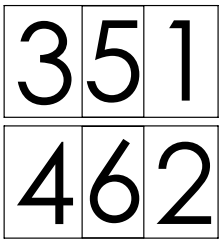
4-COMP MODEL

REAR CONTROL



4-COMP MODEL

REAR CONTROL

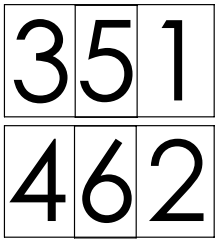


6-COMP MODEL
(500 LB/HR ONLY)

HOPPER #3 IS DEFAULT REGRIND
WITH SQUARE GATE

500 LBS/HR
BLENDER

REAR CONTROL

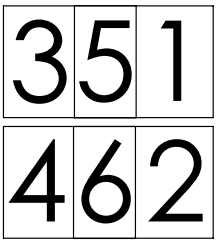


6-COMP MODEL

HOPPER #3 IS DEFAULT REGRIND
WITH SQUARE GATE

900 LBS/HR
2500 LBS/HR
BLENDER

REAR CONTROL



6-COMP MODEL

HOPPER #1 IS VIRGIN
WITH SQUARE GATE
HOPPER #3 IS DEFAULT REGRIND
WITH SQUARE GATE

4000 LBS/HR
6000 LBS/HR
BLENDER

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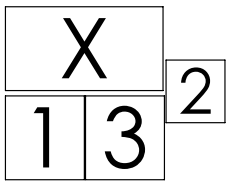
BD Series

Gravimetric Batch Blender

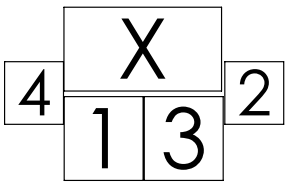
ADDITIVE FEEDER OPTIONS

REAR CONTROL



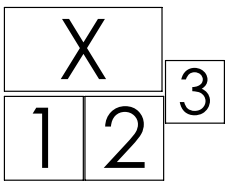
3F MODEL

REAR CONTROL



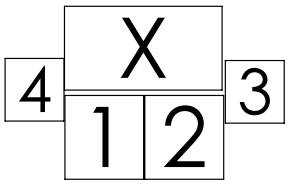
4FF MODEL

REAR CONTROL



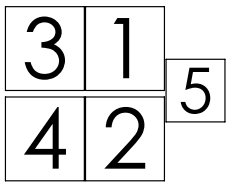
3R MODEL

REAR CONTROL



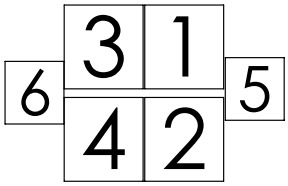
4RR MODEL

REAR CONTROL



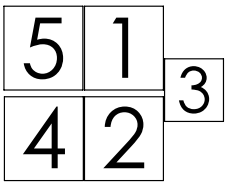
5F MODEL

REAR CONTROL



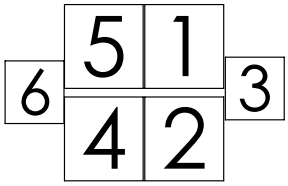
6FF MODEL

REAR CONTROL



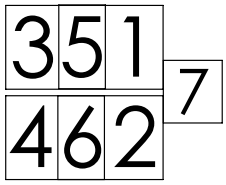
5R MODEL

REAR CONTROL



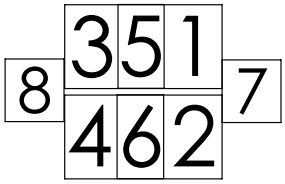
6RR MODEL

REAR CONTROL



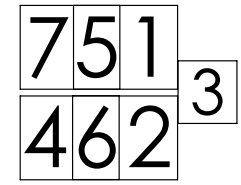
7F MODEL

REAR CONTROL



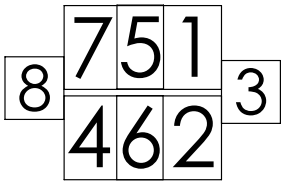
8FF MODEL

REAR CONTROL



7R MODEL

REAR CONTROL



8RR MODEL

ADDITIVE FEEDER CONFIGURATIONS ARE EQUIPPED WITH STANDARD GATES

R.A.M. (REGRIND AUGER METERING) OPTIONS

BD-900 AND 2500 R.A.M CONFIGURATIONS ARE EQUIPPED WITH ALL DIAMOND GATES

BD 4000 AND 6000 R.A.M CONFIGURATIONS ARE EQUIPPED WITH STANDARD GATES

ADDITIVE FEEDER AND R.A.M. OPTIONS AVAILABLE ON BD-900 THROUGH BD-6000 ONLY

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BD Series

Gravimetric Batch Blender

5-YEAR WARRANTY PROGRAM

The BD Blender 5-Year Warranty Program offers peace of mind by guaranteeing the quality and durability of your BD Blender investment. With this warranty, enjoy unparalleled support and long-term protection, ensuring that your operations remain smooth and efficient without costly interruptions.

Program Highlights:

- Extended Coverage
  ACS will repair or replace any defective parts supplied by ACS within FIVE years of equipment shipment to the original purchaser, labor is not covered under the warranty.

- Free Initial Inspection
  Unlike competitive warranties, we're offering a complimentary on-site warranty claim inspection. Where possible this will be conducted via an online video meeting, phone call with photo documentation, or on-site with an ACS Service Representative.

- Claim Process
  If the repair is deemed eligible for warranty coverage, the customer will be provided a Return Material Authorization (RMA) code and will send the equipment pre-paid to ACS for repair or replacement. Contact orders@acscorporate.com or 800-783-7835 to make a warranty claim.

- Non-Transferrable
  Please note that this warranty is non-transferrable and applies exclusively to equipment shipped to the original installation site.

- Exceptions & Restrictions:
  - PLC, HMI touch screen and control components are covered by standard manufacturers warranty.
  - Load cell assembly is covered by standard manufacture warranty and subject to factory review.
  - Capacitive sensor is covered by standard manufacture warranty and subject to factory review.
  - Solenoid valve and valve stack is covered by standard manufacture warranty. Subject to factory review of customer's compressed air supply quality.
  - Consumable components are not covered by warranty.
  - Applies only to blenders sold after the date 1/1/2024.

AEC is committed to a continuing program of product improvement. Specifications, appearances, and dimensions are subject to change without notice.
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