

# BM-400, BM-450 Mixer/Mill® High-Energy Ball Mills

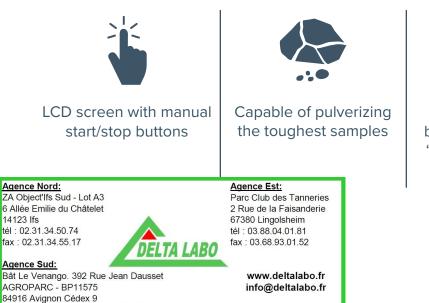
- High-energy ball mill that pulverizes hard or brittle samples to analytical fineness (<50 μm)</li>
- Equipped with forced-air cooling and safety interlock system for operator protection
- Steel housing protects the clamp mechanism and rugged construction ensures a long life of heavy use
- Shock-mounted motor enables benchtop operation

The Mixer/Mill is a high-energy ball mill available with a single clamp, or dual clamps for double capacity, that grinds 0.2 to 25 grams (per clamp) of dry, brittle samples, reducing them to analytical fineness. Samples in grinding vials are shaken with grinding media in a complex motion that combines back-and-forth swings with short lateral movements in a "figure-8" pattern. This motion produces strong G-forces that can pulverize the toughest rocks, slags and ceramics.

**Typical applications include**: mechanical alloying, nanomilling, slurry grinding, blending powders, mixing emulsions, and mechanochemistry.

### Features

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Cole-Parmer<sup>®</sup>

Clamp swings in a back-and-forth lateral "figure-8" movement



Mixer/Mill®

**BM-400** 

Vibration detection switch shuts the mill down in the event of mechanical failure

# BM-400, BM-450 Mixer/Mill®

# Sample Types Include







Cement



Pharmaceuticals



Minerals



# Before & After Samples – Stone





## Specifications – BM-400 Single-Clamp Mixer/Mill

		_
Clamp Mayamant	5.9 cm (2 <sup>5</sup> ⁄16) in back-and-forth,	
Clamp Movement	2.5 cm (1 in) side-to-side	
	1060 cycles/minute (115 VAC) or	
Clamp Speed	875 cycles/minute (230 VAC)	
	Alternate pulley supplied with 230 VAC	
	model for 1060 cpm operation	
Voltage	115 VAC, 60 Hz or 230 VAC, 50 Hz	
CE Approved	Yes	
	1/3 HP, 1725 rpm at 60 Hz,	
Motor	1425 rpm at 50 Hz	
Dimensions (L x W x H)	53 x 56 x 36 cm	
	(21 × 22 × 14")	
Net Weight	35 kg (77 lb)	
	3-prong grounded plug for 115 VAC or	-
Power Cord	2-prong European plug for 230 VAC	
		-



# BM-400, BM-450 Mixer/Mill®

## Specifications – BM-450 Dual-Clamp Mixer/Mill

2.5 cm (1 in) side-to-sideClamp Speed1060 cycles/minute (115 VAC) or 875 cycles/minute (230 VAC)Voltage115 VAC, 60 Hz or 230 VAC, 50 HzCE ApprovedYesMotor1/3 HP, 1725 rpm at 60 Hz, 1425 rpm at 50 HzDimensions (L x W x H)64 x 54 x 36 cm (25 x 21 x 14")Net Weight42 kg (93 lb) 3-prong grounded plug for 115 VAC or	Clamp Movement	5.9 cm (2 <sup>5</sup> ⁄16 in) back-and-forth,	
Clamp Speed875 cycles/minute (230 VAC)Voltage115 VAC, 60 Hz or 230 VAC, 50 HzCE ApprovedYesMotor1/3 HP, 1725 rpm at 60 Hz, 1425 rpm at 50 HzDimensions (L x W x H)64 x 54 x 36 cm (25 x 21 x 14")Net Weight42 kg (93 lb) 3-prong grounded plug for 115 VAC or		2.5 cm (1 in) side-to-side	_
Voltage875 cycles/minute (230 VAC)Voltage115 VAC, 60 Hz or 230 VAC, 50 HzCE ApprovedYesMotor1/3 HP, 1725 rpm at 60 Hz, 1425 rpm at 50 HzDimensions (L x W x H)64 x 54 x 36 cm (25 x 21 x 14")Net Weight42 kg (93 lb)3-prong grounded plug for 115 VAC or	Clamp Speed	1060 cycles/minute (115 VAC) or	
CE ApprovedYesMotor $1/3$ HP, 1725 rpm at 60 Hz, 1425 rpm at 50 HzDimensions (L x W x H) $64 \times 54 \times 36$ cm $(25 \times 21 \times 14")$ Net Weight $42$ kg (93 lb)3-prong grounded plug for 115 VAC or		875 cycles/minute (230 VAC)	· · · · · · · · · · · · · · · · · · ·
Motor   1/3 HP, 1725 rpm at 60 Hz, 1425 rpm at 50 Hz     Dimensions (L x W x H)   64 x 54 x 36 cm (25 x 21 x 14")     Net Weight   42 kg (93 lb)     3-prong grounded plug for 115 VAC or	Voltage	115 VAC, 60 Hz or 230 VAC, 50 Hz	
Motor   at 50 Hz     Dimensions (L x W x H)   64 x 54 x 36 cm     (25 x 21 x 14")   (25 x 21 x 14")     Net Weight   42 kg (93 lb)     3-prong grounded plug for 115 VAC or	CE Approved	Yes	
at 50 Hz   Dimensions (L x W x H) 64 x 54 x 36 cm (25 x 21 x 14")   Net Weight 42 kg (93 lb)   3-prong grounded plug for 115 VAC or	Motor	1/3 HP, 1725 rpm at 60 Hz, 1425 rpm	
Dimensions (L x W x H) (25 x 21 x 14")   Net Weight 42 kg (93 lb)   3-prong grounded plug for 115 VAC or		at 50 Hz	
Net Weight (25 x 21 x 14")   3-prong grounded plug for 115 VAC or	Dimensions (L x W x H)	64 x 54 x 36 cm	
3-prong grounded plug for 115 VAC or		(25 × 21 × 14")	
Bower Cord 3-prong grounded plug for 115 VAC or	Net Weight	42 kg (93 lb)	
	Power Cord	3-prong grounded plug for 115 VAC or	-
2-prong European plug for 230 VAC		2-prong European plug for 230 VAC	_

# **Ordering Information**

Description	Item Number
BM-400 Mixer/Mill Single-Clamp, 115 VAC, 60 Hz	04578-12
BM-400 Mixer/Mill Single-Clamp, 230 VAC, 50 Hz	04578-13
BM-450 Mixer/Mill Dual-Clamp, 115 VAC, 60 Hz	04578-10
BM-450 Mixer/Mill Dual-Clamp, 230 VAC, 50 Hz	04578-11

# Need a Demo?

- Virtual sample processing virtual demonstration of the equipment and sample processing
- Physical sample processing physical testing of your sample with shared results
- Physical equipment testing a demo unit can be sent to your facility to test before purchasing

#### Agence Nord:

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#### Agence Est:

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