Convertible Lab Bench Size Small Media Mill Closed Design—Horizontal

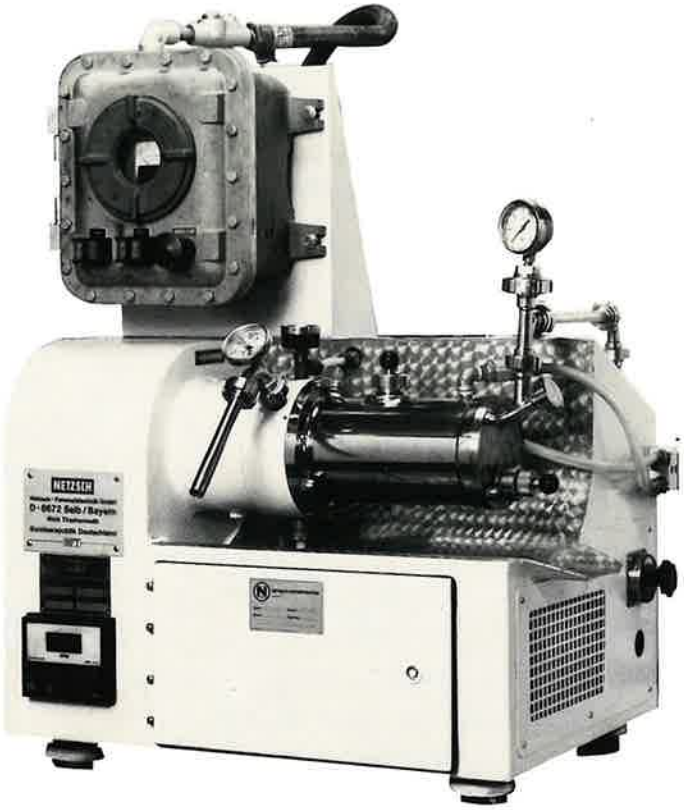


Figure 1

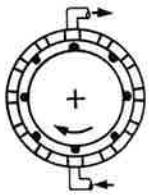


Figure 2



LME/LMJ bench size mills are interchangeable to either the John or Molinex grinding system and are used primarily for R & D applications. Available in either 1 or .5 liter sizes, the mills produce beaker size samples for product evaluation and testing. They produce ultrafine particles from feedstock measuring up to 120 microns in any type of solvent or aqueous system. The mills produce high quality dispersions on a continuous basis with any required particle size distribution.

The John grinding system utilizes a peg agitator with pegs located on the outer perimeter of a large diameter shaft, as well as on the inner wall of the grinding chamber. This system offers the most efficient media agitation for aggressive grinding of high viscosity, high solids content materials containing very hard to grind particles. (See fig. 1)

The Molinex grinding system utilizes a series of spaced discs offset on the agitator shaft to produce an augering effect forcing the grinding media against the product flow. This system affords total agitation, eliminating dead zones, and is used for grinding a wide range of solids materials and viscosities. (See fig. 2)

Featuring a variable speed self-contained feed pump and variable speed agitator drive, the LME/LMJ mills have high energy input per working volume with a 93% maximum grinding media charge capability. They have an effective internal temperature control and are capable of running at low operating temperatures. The ability to reposition discs on the Molinex shaft extends the wear life of the agitators.

LME/LMJ mills are also available as single rather than convertible mills. They can be adapted to accept progressive cavity or most other type pumps. Additional options include explosion-proof electrical systems (NEMA 7, Class 1, Div. 1, Group C & D), and an automatic shut-off to prevent machine damage.

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Convertible Lab Bench Size Small Media Mill

Materials of Construction

Chambers—high-chrome, wear-resistant steel and tungsten carbide
Agitators—high-chrome, wear-resistant steel and tungsten carbide
Gasketing—PTFE, Viton
Separator—tungsten carbide

Optional Materials

Flame-coated tungsten carbide
Stainless steel

Mechanical Seal

Tungsten carbide
Silicone carbide
Mechanical seals are cartridge type, double-acting pressurized, cooled units with a fail-safe internal pump.

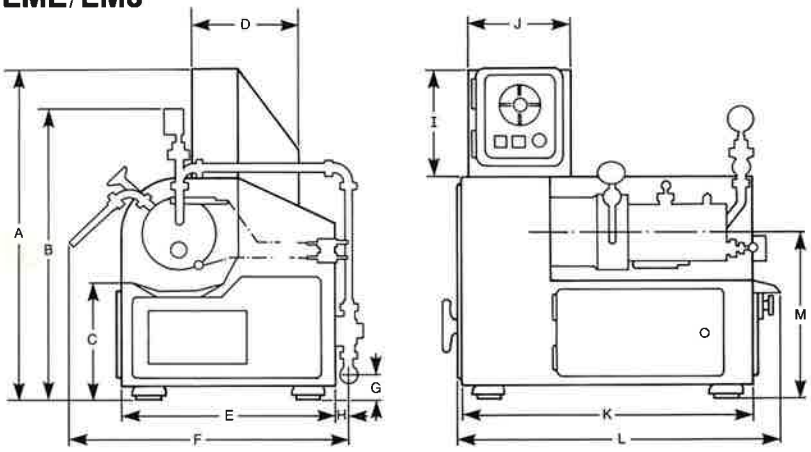
Grinding Media

Glass, steel or ceramic between 0.50 and 3.0 mm in diameter

Separator

Rotating Ring Gap separator with .2 to .5 mm fixed slot widths, depending on the media size.

LME/LMJ



Mill Type	LME/LMJ	1 liter	.05 liter
[1]Grinding Chamber Capacity Gal. (Ltrs.)	John	.26 (1.00)	.13 (0.50)
	Molinex	.26 (1.00)	.13 (0.50)
Grinding Media required for a full charge Lbs. (Kg.) John or Molinex	Glass	4.00 (1.81)	2.00 (.91)
	Steel	11.00 (4.99)	5.50 (2.49)
	Ceramic	6.00 (2.72)	3.00 (1.36)
Agitator Drive HP		3.00	
Pump Drive HP		0.30	
Agitator Circumferential Speed (Avg.) Ft./Min. (M./Sec.)	John	788-2291 (4.0–11.64)	
	Molinex	822-2400 (4.18–12.19)	

[1]Less Grinding Media, with Agitator Shaft Installed

Dimensional Data In. (Cm.) Approx.	LME/LMJ
A	35⅞ (91)
B	27 15/16 (71)
C	11¼ (29)
D	14 (36)
E	20 1/16 (51)
F	26 9/16 (67)
G	2 9/16 (7)
H	1¼ (3)
I	14 (36)
J	14 (36)
K	27 9/16 (70)
L	30 5/16 (77)
M	15¾ (40)
Approx. Weight Lbs. (Kg.)	387 (175)

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