

## MINI MILLS

**SMALL SAMPLE PROCESSING** Mini Mills are self-contained bead mills designed for wet milling, fine grinding, and fluid dispersions. Available in various model sizes with chambers ranging from 25-2,000 mL. These mills utilize grinding media to generate high-shear and impact forces that reduce agglomerates or finite particles, making them ideal for product research, quality control, and technical service applications.

**FEATURES & CAPABILITIES** Mini Mills feature a built-in, two-stage internal pumping mechanism and offer variable speed operation. With options for general-purpose, explosion-proof, or intrinsically safe electrical controls, they ensure safe operation in any environment. Designed with a water-jacketed chamber and optional end plate cooling, temperature control is seamless. Quick-release latches enable easy removal of components and cleaning is achieved by simply passing a compatible solvent through the milling system.



Right: M250 with PLC Controls Left: Explosion-Proof Controls



# PILOT MILLS

**SCALE TO PRODUCTION** Pilot Mills are ideal for laboratory research, small batch production, and product development. These mills offer wet milling, fine grinding, and dispersing capabilities for fluid or paste-type viscosities. They operate on a continuous basis or by recirculation, providing precise control of variables to mimic production equipment. Available in various models with chamber volumes from 400-2,000 mL, these mills are versatile tools for predicting production expectations and achieving batch-tobatch consistency.

**CONTROL & EFFICIENCY** Pilot Mills can be equipped with different feed pump systems and feature variable speed operation and variable flow rates. PLC control options are available for enhanced control and monitoring. These mills are designed for easy maintenance with quick release chamber closures and piping. Capable of producing sub-micron particles, they enable efficient dispersion using a variety of grinding media. Obtain valuable information for scaling-up to production and monitor process functions for reliable results.

Right: Pilot Mill with PLC Controls

### **PRODUCTION** MILLS



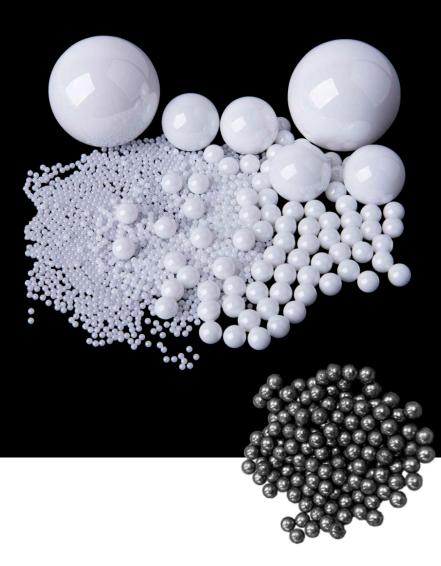
**STREAMLINED MILLING** Designed for wet milling, fine grinding, and dispersing applications with liquid and paste-type viscosities, these horizontal mills offer continuous or recirculation operation. Precise control of agitator speed and pump flow rate ensures uniform batches and consistent product quality.

**FEATURES & OPERATION** Production Mills feature a direct drive system for simplicity and energy efficiency. The water-jacketed chamber and end plates provide temperature regulation. Explosion-proof motors and operator controls can be customized to your specific application. The PLC system provides monitoring, data recording, and diagnostics.

Left: 40L Production Mill with PLC Controls Below: Agitator Discs



# **GRINDING** MEDIA



#### COMPREHENSIVE SELECTION EMI Mills offers a

wide range of grinding media to meet all applications:

- Glass: 1.5 kg/L
- Zirconium Silicate: 2.3 kg/L
- Cerium Stabilized Zirconia: 3.8 kg/L
- Yttria Stabilized Zirconia: 3.7 kg/L

Selecting the appropriate media is based on the desired fineness of particles and viscosity of the product being milled. Smaller beads offer greater count per volume, leading to excellent dispersion and particle polishing forces. Larger beads provide higher impact for faster reduction rates. Rheological properties, composition, and abrasiveness of the product are considered during selection, as well as the need for product purity and compatibility with the media.

**MANAGEMENT & SUPPORT** Along with the grinding media itself, EMI Mills provides technical support and media management guidance from years of experience. Performance relies on using the correct media type, size, and mill loading, along with proactive management. On all fronts, we are an extension of your team to ensure maximum longevity and processing efficiency.

> Top Left: Ceramic Grinding Media Left: Steel Grinding Media

### LABORATORY DISPERSERS



SIZED FOR YOUR PROCESS Our laboratory and pilot scale dispersers and mixers offer versatile processing for various materials, ensuring uniform results. These adaptable units offer high-shear dispersion and low-speed mixing for batches up to 10 gallons. Multiple blade configurations are available to meet your specific requirements.

CUSTOM FEATURES With variable speed and heavy-duty motors, our dispersers/mixers deliver consistent performance. Optional features include digital gauges, PLC controls, and interchangeable blades to align with your processing needs. Head lift systems, shaft guards, and sensors ensure safe and secure operation. Stainless steel contact components provide duarbility and explosionproof options are available for hazardous environments.

INTEGRATE CONTROLS WITH DOWNSTREAM OPERATIONS

Above: Standard Electric Lift with High-Shear Blade and PLC Controls

-

# ADDITIONAL VALUE

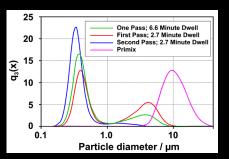


**CHILLERS** Chillers offer a reliable and efficient alternative to tap water, providing clean and precise temperature-controlled fluid for closed-loop cooling. With advantages such as powerful pumping, no scale build-up, constant cooling, and precise temperature control, these chillers are suitable for various laboratory and production applications. With EMI Mills' expertise in chiller selection, finding the right one for your application is a simple, straightforward process.

**TEST LABORATORY** The EMI Mills Test Lab provides an opportunity to validate the effectiveness of our technology. With a particle size analyzer and other tools, we ensure thorough analysis of the results, enabling accurate and reliable data.

**PARTS & SERVICE** We offer comprehensive parts and service support, including an extensive inventory of on-site spare parts and technical assistance for your equipment and process technology. With a commitment to quality and global reach, our products are proudly made in the USA and available worldwide.

**REFURBISHING** Worn out machine? Broken or missing components? Send us your unit and we will inspect, diagnose, and repair it to like-new status. With quick turnarounds, this is an effective way to avoid costly downtime.



### **CONTACT** US



**A SCHOLD COMPANY** In 2023, EMI Mills was acquired by Schold Manufacturing, a leading provider of industrial mixing equipment worldwide. This strategic partnering bolsters Schold's product offering in fine particle technology, specifically with lab/pilot batches where uniform dispersions and narrow particle distribution is critical. For equipment complimentary to EMI Mills, Schold has you covered. From bench-top to large-scale production, we have a solution to elevate YOUR process. Call 1-800-4MIXERS or visit Schold.com to learn more.

