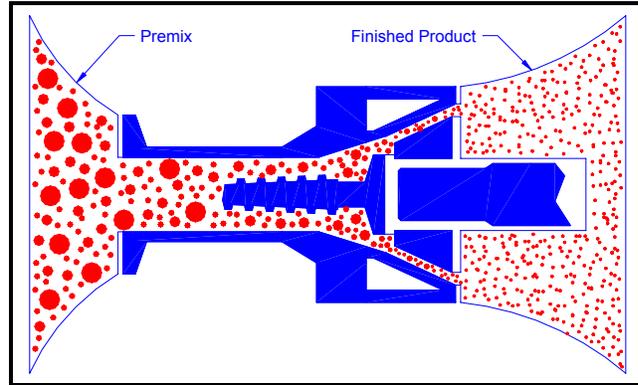




New High-Shear Colloid Mills



Bematek has been a technology leader in colloid mills for the wet mixing industry for over fifty years. The new High-Shear mills, which feature industry-standard, quick-connect fittings and all stainless steel construction, continue this tradition of excellence. Our commitment to total customer satisfaction was the driving force behind the design of a line of colloid mills that produce the ultimate in particle size reduction for sub-micron emulsions and dispersions.

The new **Bematek** High-Shear colloid mills provide highly efficient particle size reduction for nearly any multi-component fluid emulsion or dispersion. A high-speed conical rotor and matching jacketed stator subject the product to intense hydraulic shear forces. The result is a finished emulsion or dispersion with a small mean particle diameter and a narrow particle size distribution.

An efficient, high-speed, rotor/stator pair is at the heart of the high-shear milling section of the **Bematek** colloid mills. After entering the milling chamber, the premix is assisted into the rotor/stator gap by a pumping impeller (see the graphic above). While in the rotor/stator gap, the internal phase particles of the emulsion or dispersion are reduced in size by the intense hydraulic shear to which they are subjected. The final size of the particles depends on readily adjustable process parameters such as: rotor speed, rotor/stator gap setting, and residence time (the length of time the particles remain within the shear zone).

Bematek's exclusive **Modular Engineered Design™** permits the configuration of any **Bematek** mill for optimum efficiency in any application. A variety of alternative rotor/stator designs may be easily installed on-site to adapt the mill for processing multiple products. In addition, a choice of base mounting configurations and a product

outlet connection that may be rotated 360° makes integration into an existing system very simple. Best of all, these options are available at standard pricing and delivery.

To meet a broad spectrum of application and flow rate requirements, **Bematek** has designed a complete line of *High-Shear* colloid mills for laboratory, pilot plant, and production installations (see the table to the left). Our experienced application engineers will work closely with you to specify the perfect mill to meet your processing requirements.

Model No.	Motor (typ. hp)	Speed (typ. fpm)	Flow Rate (typ. gph)
CZ-60	1-2	7,000	0-250
CZ-110	3-10	7,000	0-600
CZ-260	5-25	7,000	5-1,500
CZ-640	15-50	7,000	15-4,000
CZ-1400	30-100	7,000	30-9,000

Typical Low-Viscosity Performance Data

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