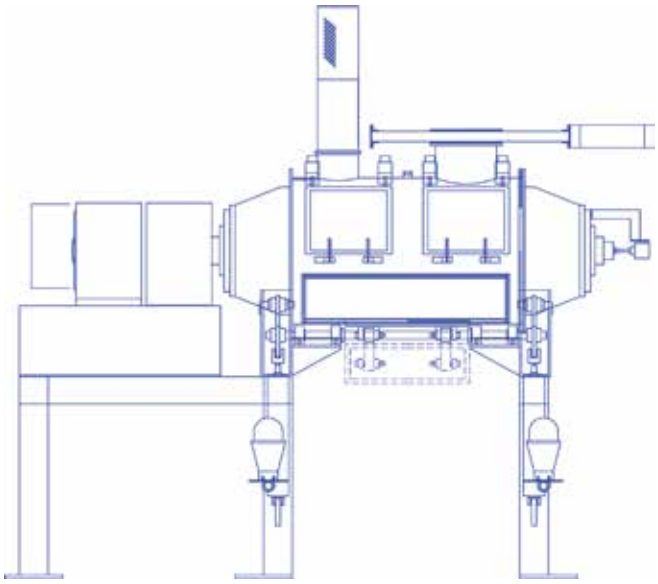
PROCESSALL

Bulk Moulding Compounds

The Processall Mixer with its plowshaped agitators has given outstanding performance in the mixing of powders, viscous and fibrous materials used in the manufacture of bulk molding compounds. Bulk Molding Compound (BMC) typically consists of the following ingredients: polyester resin, catalyst, modifier, fillers, pigments, and fiberglass fibers of different lengths. Bulk molding compounds provide superior performance characteristics. These characteristics include: excellent mechanical, electrical and chemical properties, weather resistance, high strength per weight ratio, flame resistance capabilities and good flow characteristics when conforming to a mold.

Traditional mixing technology used in the making of BMC involved the use of two mixers. One high speed disperser to prepare the heavy viscous paste, the other a high shear sigma blade to mix the fibers with the paste. This normally resulted in many processing problems such as inadequate dispersion of paste and fiber opening. Two step processing requires an additional material handling step. Emptying a viscous liquid mixer and moving the product to another machine requires additional labor and clean up costs. Styrene vapor is lost when the open style mixers are used because, during material handling, additional vapor es-capes increasing material costs. Due to the high shear found in the sigma blade, the fibers tend to break and filamentation (de-fibering) of the fiber strands occurs. In utilizing two vessel processing dispersion is poor, which could cause inferior physical properties in the compound. Finished product is discharged from the sigma mixer by hand requiring additional manpower.



Typical Applications:

- Automotive Industry
- Appliance Components
- Power Tool Housings
- Computer Components
- Electrical Fixtures
- Dishware

The Processall Mixmill Mixer has the capability of adjusting to the degree of mixing by using the mills in conjunction with the main mixing elements. These mixing elements working in union with each other provide thorough intensive mixing for preparing the paste and efficient low shear gentle mixing to add the reinforcing fiber to the resin. All within the confines of a single vessel.

The ability to mix the entire batch in a single vessel, without additional material handling steps, reduces cost and make the system more adaptable to automation. Special large discharge doors found on the Processall Mixmill are used to remove the material efficiently, eliminating the need to manually remove the material. Discharge of the mixer is accomplished by opening the discharge door and operating the mixer.

The Processall Mixmill can be easily cleaned by adding solvent with scrubbing agent and operating the machine for short periods of time. The cleaning materials are then discharged.

The Processall mixer can process fibers anywhere from 1/8” to 1/2” in length at loading levels from 5 to 50%. Typical mix cycles are in the 5-10 minute range. This ideal mixing practice produces evenly coated fibers in the product. The material is easy to handle, with less bulk density than that normally produced by other mixing processes. Not only is the Processall mixer capable of mixing fiberglass, but also a wide variety of the latest generation of “high tech” reinforcing fibers.

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