



GEMCO



Setting Industry Standards
by *Exceeding* Customer Expectations



Gemco the leader in powder processing

The General Machine Company of New Jersey (a name later shortened to GEMCO) began operations in 1916 as a general machine shop to the growing industry around Newark, NJ. In the 1930s, John L. Muench, Sr. was at a local government arsenal when he was asked about a safer machine to blend gunpowder. The double cone tumble blender was the result with the original patent being issued circa 1937.

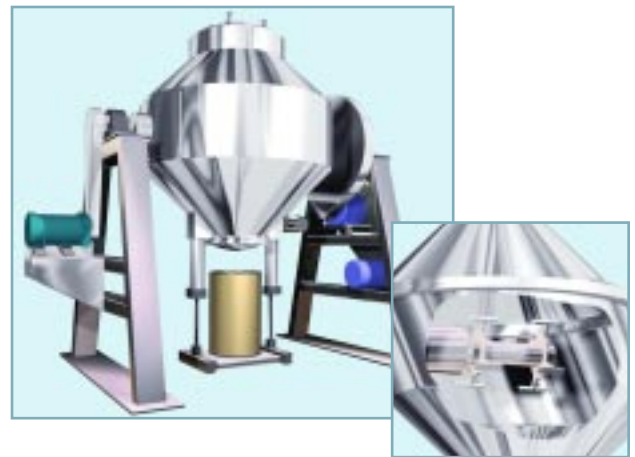
The unique concept of the tumble blender created a demand such that it blossomed into a product line that ended Gemco's days as a job shop. Product development followed customer's needs and requests. A center band was added in the early '40s to be able to insert an agitator. A special segmented spherical disc valve solved leaking powder problems in the later 40s. Agitators were modified to provide liquid injection in the '50s. Simultaneously vessels were jacketed to create dryers. The '60s added the Porta-hopper for semi-continuous operations. The Vaaler award winning Gemcomatic drum loading/unloading system was perfected in the '70s as was the Slant-Cone™ design for better, faster blends.



The '80s brought the Airless I spray which provided the capability to handle viscous, high-surface-tension, heated and/or minute-additive liquids. The '80s also added fabrication (and later ASME code qualification) to our capabilities, as quality was harder to control with outside vendors. In the '90s, Gemco continued the tradition with enhanced process monitoring/control, integrated material handling, process step consolidation and dust/fume containment systems to limit worker exposure as well as product contamination. In 2000, Gemco became ISO 9001 certified.

Concurrent with the product line development has been Gemco's internal operating systems and capabilities. Gemco maintains a modern 55,000 square foot facility in Middlesex, NJ where state-of-the-art systems combine to provide a quality product at a competitive price. Gemco is today highly computerized from computer-aided design (CAD) in engineering to production planning, scheduling, and purchasing. Much of the machining is done with CNC equipment to reduce cost and ensure repeatable quality. Above all, what has evolved is a philosophy of providing innovative custom equipment from proven concepts and component designs; a seasoned and dedicated management committed to customer needs through conservative designs; and a responsive team able to both anticipate and react to customer needs in a timely and professional manner. The proof of that statement is found in our extensive base of repeat customers ranging from fortune 500 companies to small start-ups that rely on our technology, support and craftsmanship.

Gemco's long history of innovations make it uniquely qualified to offer its years of expertise in powdered blending technology. This expertise will assist you in designing the unique type, size and options to suit your specific application. We take into account your production requirements, volume required per shift/per day, limitations of batch size due to upstream and down stream processes, loading and unloading methods, cleaning and construction costs.



Gemco, the most respected name in Tumble Blenders, Vacuum Tumble Dryers and Valves, is approaching the new millennium with the confidence, focus and commitment necessary to meet the ever-more stringent requirements of our customers.

Blending Basics

As a primer, blending in its simplest form is the combining of two or more materials to produce a homogeneous mixture. These materials may be any combination of particulate (solids blending) or particulate and liquid (liquid – solid blending). Normal tumble blending of free-flowing materials provides a gentle mixing action. For materials that tend to lump up or for high intensity blending, an internal High-Shear Bar is utilized. Critical to any blending operation is the quality of the blend (batch variations). What constitutes a good blend or an acceptable blend is totally application specific.

Whatever your blending requirements, Gemco has the solutions to fit your process.

Considerations In Selection

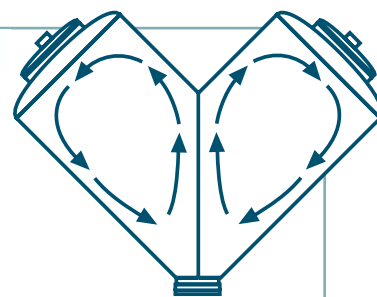
Before selecting any blending system, it is necessary to understand the characteristics of the materials to be blended, how the material is transported to and from the blend and how the blending system will be integrated into the facility.

Key considerations include:

- Material Characteristics
- Loading and Unloading
- Product Changeover
- Resource Availability
- Single or Multi-Floor Operation
- Daily Through-Put
- Cleaning
- Cross Contamination
- Space Limitations
- Process Flow
- Industry Regulations
- Worker Exposure
- Safety
- Quality of the Blend

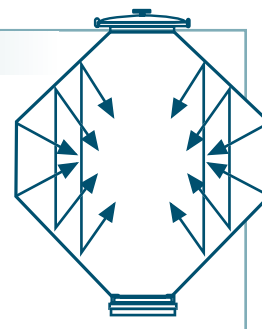
v - shape

Gemco V-shape blenders are very popular in a wide variety of industries. The blend is achieved by the constant rolling action of the classic tumble blender. Each leg of the V-shape works independently to efficiently achieve a uniform blend. This precise mixing action results in blend variations of 1-2%. Each cylindrical leg has an access cover for easy material loading and cleaning. The V-shape, as all tumble blenders, requires low maintenance and consumes little horsepower.

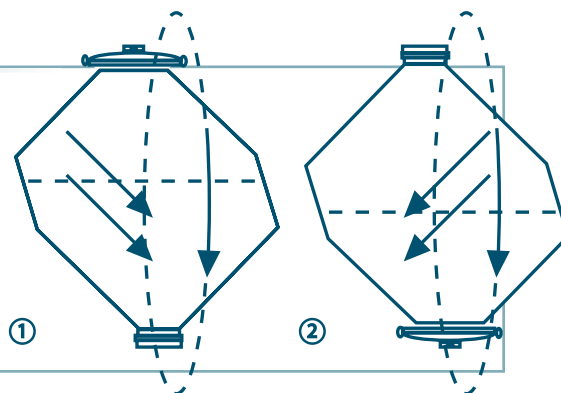


double cone

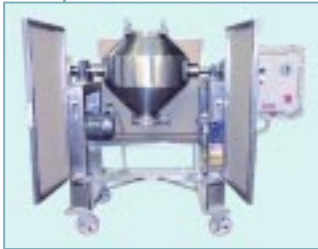
The unique design of the Gemco D/3 Double Cone blender results in a high degree of particle mobility without the use of internal baffles. This type of blender offers a low profile, thus requiring less headroom than that of a V-shape blender. One access cover means easier cleaning and inspection. The Double Cone is a proven performer in a wide variety of industries, offering greater overall volume and high efficiency with blend variations in the range of 1-2%.



The asymmetrical geometry of the Gemco Slant Cone™ design offers very fast blend times. High axial particle mobility plus the intermeshing action of materials results in blend times of up to 33% less than other designs. In addition, The Slant Cone™ achieves more control and a more precise end product with blend variations typically half that of the other shapes regardless of how the material is loaded into the blender.



GEMCO Equipment has Established a Standard of *Performance Unmatched* in the Entire Industry



Lab and Pilot Equipment



Spherical Disc Valves



Retractable Sleeve



Gem*Fill



Production Blenders



Vacuum Dryers and Granulators



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