



**Benefits:**

- *Easy removal and CIP designs*
- *High output*
- *Better distribution of ingredients*
- *High production flexibility*
- *High degree of process reliability and repeatability*

## **MIXING APPLICATIONS AND TECHNOLOGY**

Sharpe Mixers' proprietary computer programs draw from thousands of parameters to arrive at an optimum solution for a variety of mixing issues. Mixing scale, time to uniformity, torque/unit volume, bulk fluid velocity, horsepower/unit volume, momentum and many other analyses methods are considered when engineering a system. Product rheology, tank geometry, retention time, pressure, temperature and dozens of other process details also come into play with Sharpe Mixers designs.

### ***Chemical Processing***

Sharpe's equipment is designed for a wide variety of agitation solutions across global chemical processing industries. Sharpe provides mixing solutions for chemical reactions, heat and mass transfer, polymerization, suspensions, and liquid-gas blending.

### ***Food & Beverage/Pharmaceutical***

Sharpe also designs equipment to meet FDA, USDA, and 3-A sanitary standards for mixing applications requiring easy-to-clean components.

### ***Mining & Minerals/Pulp & Paper***

Sharpe designs equipment to process precious metals, high value minerals and coal at installations worldwide. Sharpe Mixer remains a preferred choice of the pulp and paper industry with its proprietary VQP and flux analyses being utilized to create durable and efficient mixers.

### ***Water & Wastewater Treatment***

Sharpe combines advanced impeller technology and drives to provide cost effective solutions for the many applications used throughout the waste and water treatment facilities.

### ***Power & Utilities***

Sharpe's mixing equipment is designed for the many demanding applications used in the power industries. Top and side entry mixers successfully process flue gas de-sulphurization, boiler feed water, coal dust control, sludge blending, and neutralization.

## Typical Mixing Applications and Industries

Each industry has different requirements and unique nuances beyond just the mixing operation. Sharpe Mixers specializes and fine-tunes mixer designs for specific industries. Sharpe's standard procedures include meeting special requirements for materials or polish, electro-polish, coatings, unique seal or motor specifications, PMI, CoC, certified testing or other documentation.

Sharpe understands the "standards of the industry" for mixing food and beverages, pharmaceuticals, nuclear waste, or molten lead and provides custom mixing solutions and equipment that pertain to specific mixing processes.

### Applications

- Dispersion
- De-agglomeration
- Dissolution
- Suspension
- Reaction acceleration
- Particle size reduction
- Homogenization
- Emulsification
- Slurries
- Extraction
- Separation
- Precipitation
- Flotation
- Leaching
- Blending
- Polymerization
- Crystallization
- Hydrogenation
- Fermentation
- Purification
- Equalization
- Neutralization
- De-sulphurization

### Sanitary Industries

- Food & Beverage
- Pharmaceutical & Biotech
- Cosmetic & Personal Care

### Industrial

- Petroleum Engineering
- Chemical
- Automotive
- Asphalt
- Paints & Pigments
- Polymers
- Pulp & Paper
- Chemical
- Municipal
- Waste Treatment
- Mining



*Sharpe Mixers will provide quality mixing equipment that meets the distinct needs of the process.*

*Contact a Sharpe Mixers local representative to review your process and determine the most cost effective solution.*

