



ENTORNO  
INDUSTRIAL



## Pipeline Mixer

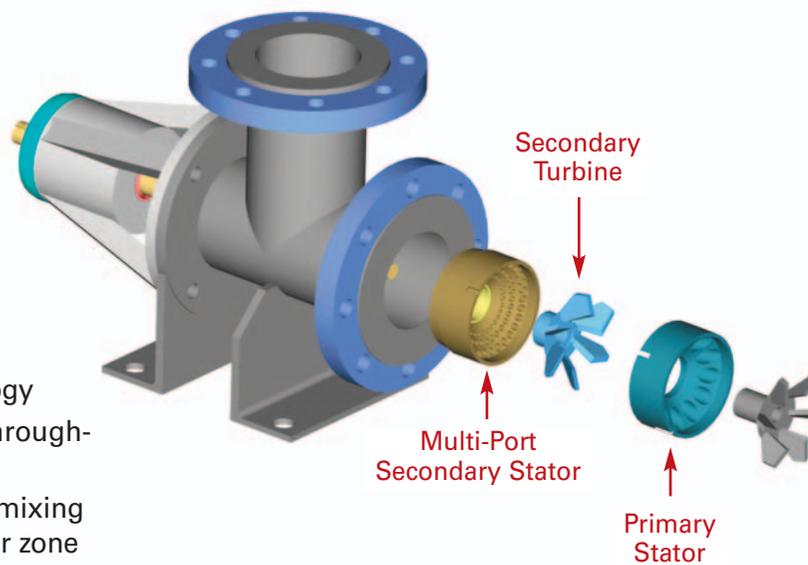
Continuous Flow In-Line High Shear Mixer



## Reliability

The Greerco Pipeline Mixer series is engineered and proven to provide many years of dependable service. The design exceeds the high quality standards necessary to achieve optimal process results and withstand the rigors of difficult processes that require high shear mixing.

- Available in industrial and sanitary models
- Single or multi-stage heads for process customization
- The robust stator design handles severe duty better than competitive designs that utilize screen technology
- The axial in-axial out flow path results in higher throughputs with lower horsepower requirements
- The entire process stream is directed through the mixing head, eliminating any chance of bypassing the shear zone
- With over six decades of successful installations, the Pipeline Mixer has earned its reputation as an excellent solution for high shear applications



*Standard Tandem Shear Configuration*

## Cost Effective Solution

### Low Horsepower

Reduces initial investment and energy consumption

### High Throughput

Faster processing rates improve productivity

### Robust Design

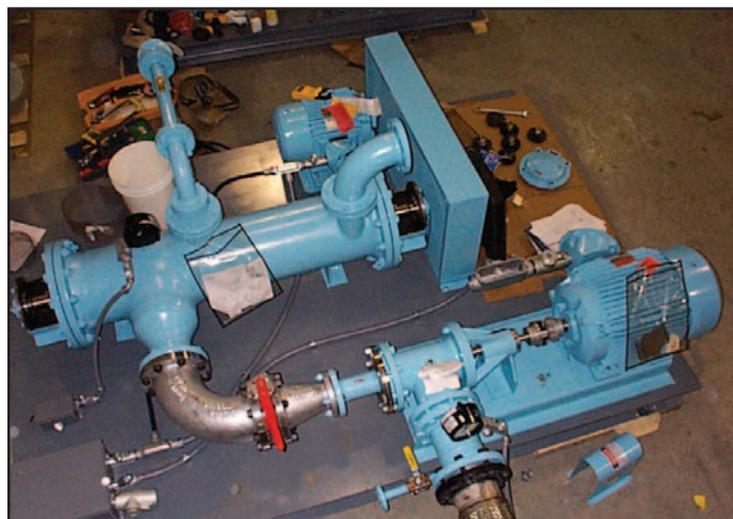
Minimal downtime and maintenance costs

## Mixing Mechanism

- Versatile body design allows for the use of either a single rotor-stator or tandem rotor-stators to meet desired process results
- High speed turbine running in close proximity to a fixed stator creates intense hydraulic and shear forces
- Tightly held tolerances on machined components allow for consistent and predictable performance

## Applications

- Solids incorporation
- Homogeneous dispersions
- Solids deagglomeration
- Rapid blending
- Particle size reduction
- Pre-packaging product refinement



Aerosols • Antacids • Antibiotics • Antiperspirants • Bacterial Slurries • Biologicals • Cell Rupturing • Coatings • Cold Creams • Color Dispersions • Flavor Syrups • Fluxes • Gum Dispersions • Hair Gel • Herbicides • Hormone Emulsions • Injectables • Insecticides • Liquid Make-Up • Lotions • Printing Inks • Refractory Dispersions • Salad Dressing • Sauces • Serums • Shampoo • Shaving Cream • Silicone Emulsions • Sulfur Dispersions

***With over 67 years of experience servicing the needs of the high shear market and its customers***

## Mechanical Construction

### Industrial Model

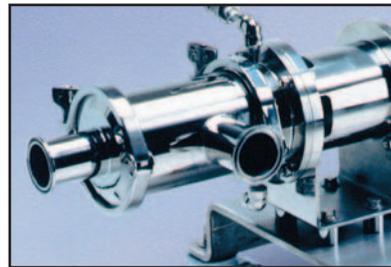
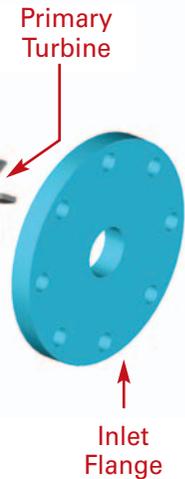
- 316SS wetted parts
- Stellite® bushings
- Single mechanical seal
- Explosion-proof motors
- Painted base, guard and supports
- NPT inlet with flanged outlet

### Sanitary Model

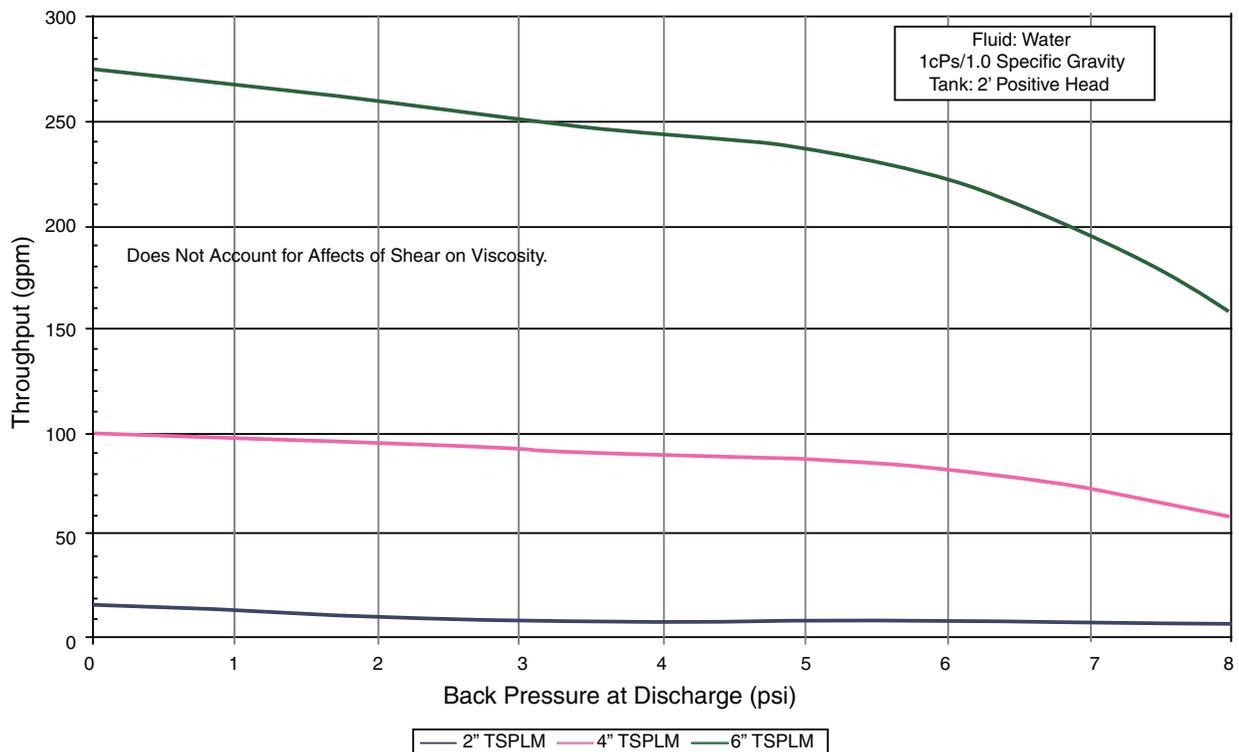
- 316SS wetted parts
- FDA Teflon stator bushing
- Sanitary, tri-clamp connections
- Single mechanical seal
- Easy-clean, washdown motors
- 304SS base, guard and supports

### Optional Features

- Alternate stators
- Double mechanical seal
- 440 hardened SS rotor-stator
- Alternate motor enclosures
- Push cart with casters for mobility
- Jacketed body
- Alternate seals and seal faces



## Tandem Shear Pipeline Mixer Throughputs



s • Cosmetics • Deodorants • Depilatories • Drug Dispersions • Dye-stuffs • Essential Oils • Eye Make-Up • Fertilizers • Foods • Flavor Emulsions  
 • Lubricants • Mascara • Mayonnaise • Medicinals • Mineral Oil Emulsions • Ointments • Pharmaceuticals • Photographic Emulsions • Pigments  
 • Dispersions • Syrups • Textile Emulsions • Toiletries • Vaccines • Vitamins • Wax Emulsions • Welding Fluxes • Yeast • Zinc Oxide Ointment

ers, today's Greerco technology has also been known as Gifford Wood and Eppenbach mixers.

## Homogenizers

Greerco offers a full line of tank homogenizers for use with small R&D or full-scale batch operations. Homogenizers may be used to replace or supplement common agitators in operations where de-agglomeration and dispersion operations are critical.



## Colloid Mills

Greerco offers the most versatile line of colloid mills that allow the user to easily modify the shear rate to achieve the desired process results while ensuring precise repeatability. Available in vertical or horizontal mounting positions, these high shear mixers are ideal for batch, batch-continuous or in-line applications.



## Greerco Factory Services

### Machine Rebuild Programs:

The Greerco factory offers a total equipment service program, where for the cost of replacement parts and a small fee, the customer will receive a machine rebuilt to factory specifications complete with a mechanical warranty on parts and labor. Emergency, same day turn around available on most models.

### Flexible, Low-Cost Rental Program:

All lab models and most full scale units are available for rental. The program includes two free weeks and credit towards the purchase of either the rental unit or new equipment. The rental program can often be tailored to meet your specific needs.



**Chemineer, Inc.**  
5870 Poe Avenue  
Dayton, Ohio 45414  
Telephone: (937) 454-3200  
Email: chemineer@nov.com

**Chemineer, Ltd.**  
7 Cranmer Road, West Meadows  
Derby DE21 6XT, England  
Telephone: 44-1-332-546700  
Email: chemineeruk@nov.com

**Chemineer China**  
Room 2005, Tower 1, Plaza Morden  
369 Xianxia Road  
Shanghai 200336 China  
Telephone: 86-21-61240001  
Email: chemineercn@nov.com

## Bulletin 122



**Chemineer, Inc.**  
125 Flagship Drive  
North Andover, MA 01845  
Telephone: (978) 687-0101  
Email: navinfo@nov.com  
www.kenics.com  
www.greercomixers.com

## Chemineer International Sales Offices:

Brazil  
Mexico  
Singapore

### Your Local Contact:

#### ENTORNO INDUSTRIAL, S.A. DE C.V.

Juan Sarabia No. 205, Col. Nueva Santa María, 02800 México, D.F.  
Tels.: (55) 5356-7206 • Fax: (55) 5356-7209  
e-mail: ventas@entorno-industrial.com • direccion@entorno-industrial.com www.entorno-industrial.com

For the nearest sales office call 1-800-643-0641 or go to [www.chemineer.com](http://www.chemineer.com)

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