



SHEARPRO

HIGH SHEAR EQUIPMENT

By MXD Process

**The highest precision
for the hardest jobs.**

PRODUCT BROCHURE

MXDPROCESS.COM



Here to help, from beginning to end.

We founded MXD Process on the belief that helping companies better serve their customers can change the world. We believe we make the world a little better when we help customers produce higher-quality products at a better price while consuming fewer resources. To bring this reality to life, we strive to be the most helpful company in the process engineering and equipment industry.

We do this by starting with a simple question, "What are you trying to make?" We dig into your process design and production methods to deeply understand your needs. We apply our process expertise to customize a solution to solve your challenge, not sell what products we have on the shelf. Our teams support you through installation and ramp-up so you can better serve your consumers.

Our broad range of process tanks, mixers, controls, mills, and accessories are designed in-house to meet your needs. Let's connect and work together to improve your process and make the world a little better every day.

MXD Process Products



When ordinary mixers can't cut it.

Let's face it: high-shear mixing can get pretty complex. There's a lot to juggle between achieving that spot-on homogenization, nailing the perfect emulsion, or getting that chemical reaction just right.

That's precisely why we rolled out our ShearPro line of high-shear mixing equipment. We took all those head-scratchers and said, 'Let's make this easier for everyone.'

Here at MXD Process, we get how vital these components are in a process. That's why we understand your needs, customize the right ShearPro mixer for your budget, and help support you through installation and beyond.

ShearPro is our way of taking the complex, the tricky, and the downright complicated out of high-shear mixing. So you can focus on the big picture (or just enjoy a little more peace of mind), knowing that mixing is one less thing on your plate to worry about. Because, at the end of the day, we're all about making your day smoother, one mix at a time.



High Speed Dispersers

Our DP Series high shear dispersers are utilized across a wide spectrum of process industries. DP Series dispersers are specially engineered to quickly and efficiently impart powders and other solids into liquid while breaking down agglomerations, creating homogenization, and emulsifications. Available in benchtop, laboratory scale models to full production scale handling up to 2,000 gallons volume and 50,000 cps viscosity.



DP1 Benchtop Disperser

The DP1 is designed as a lab scale disperser, optimized for volumes under 5 gallons. This unit is equipped with a single high shear dispersion blade and is best suited for low to medium viscosity mixing applications

Standard Features

- Electric, Air, or Inverter Duty Explosion Proof motors
- Vertical air or electric lift from 12" - 14"
- Container holder for securing mixing vessel
- 304 & 316 grade stainless steel wetted components
- Digital speed controller with RPM readout



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DP2-DP6 Post Mount Dispersers

Our post mounted dispersers are available in a variety of frame sizes to handle volumes up to 2,000 gallons of low to medium viscosity material. All DP series disperser models can be customized to meet your processing needs, whether more shear, flow, or torque is needed.

Standard Features

- Electric, Air, or Inverter Duty Explosion Proof motors
- Vertical air, air over oil, or hydraulic lift of 24"-72"
- Container holder for securing mixing vessel
- 304 & 316 grade stainless steel wetted components
- Digital speed controller with RPM readout
- Interchangeable dispersion blades offering higher flow or extra shear





Ultra-Shear Rotor Stators

Our RP Series post mounted rotor stators provide ultra high shear emulsion and homogenization capabilities in small to full production scale batches. Interchangeable rotor stator heads allow each mixer to be customized for your specific process needs, from additional shearing and larger particle reduction. Quickly and easily achieve reduced cycle times with the RP Series rotor stator mixers.



RP1 Benchtop Rotor Stator

The RP1 is designed as a lab scale high shear mixer, optimized for volumes under 5 gallons. This unit is equipped with a 2.5" rotor stator head and is best suited for low to medium viscosity mixing applications.

Standard Features

- 500-5000 RPM
- Electric or Inverter Duty Explosion Proof motors
- Vertical air or electric lift from 12" - 14"
- Container holder for securing mixing vessel
- 316 grade stainless steel wetted components
- Upgraded bronze, PTFE and FDA PTFE rotor stator bushings
- Digital speed controller with RPM readout

Ultra-Shear Rotor Stators

Our RP Series post mounted rotor stators provide ultra high shear emulsion and homogenization capabilities in small to full production scale batches. Interchangeable rotor stator heads allow each mixer to be customized for your specific process needs, from additional shearing and larger particle reduction. Quickly and easily achieve reduced cycle times with the RP Series rotor stator mixers.



RP2-RP3 Post Mount Rotor Stators

These post mounted rotor stators are optimized for mixing volumes from 5 - 55 gallons. An easily adjustable lift height allows for precise positioning of the rotor stator head in the mixing vessel, allowing for a wide viscosity mixing range.

Standard Features

- 500-5000 RPM
- Electric or Inverter Duty Explosion Proof motors
- Vertical air or electric lift from 24" - 36"
- Container holder for securing mixing vessel
- 316 grade stainless steel wetted components
- Digital speed controller with RPM readout





Ultra-Shear Rotor Stators

Our hanging rotor stator mixer is a portable, ultra high shear solution for batch processing. Quickly and easily lift and lower the mixer into a variety of open vessels. Our portable mixer stand options are optimized to take the work out of moving the rotor stator, giving you flexibility in your overall mixing processes. Interchangeable rotor stator heads allow each mixer to be customized for your specific process needs, from additional shearing and larger particle reduction. Achieve reduced cycle times with the Batch Rotor Stator Series mixers.



Hanging Rotor Stator

Available in 3 models with numerous customizations and configurations, these batch rotor stators can meet the rigorous demands of ultra high shear and speed processing.

Standard Features

- Electric or Inverter Duty Explosion Proof motors
- Shaft assembly lengths from 28" - 56"
- Upgraded bronze, PTFE and FDA PTFE rotor stator bushings
- 316 grade stainless steel wetted components

Batch Rotor Stators



Portable Mixer Stands

We offer 2 unique models for lifting and moving batch rotor stators, to match your budget and needs. Both mixer stands offer easy portability for moving from vessel to vessel.

Economy Hoist Stand

- 250 lbs. lift capacity
- 59" stroke
- 104.5" maximum lift height
- 42" portable base opening
- Manual air or hydraulic lift arm

Heavy Duty Lift Stand

- 750 lbs. lift capacity
- 50" stroke
- 127" maximum lift height
- 42" portable base opening
- Optional 9" drop arm
- Manual hydraulic lift with foot pump



In-Line Rotor Stators

Our extensive selection of in-line rotor stators provide high shear, continuous processing. These mixers significantly reduce processing time and are highly customizable, allowing for precise process tuning to elevate your mixing process. These in-line mixers can be used for blending, producing extremely stable emulsions, ultra-fine dispersions, accelerated reactions, eliminates fish-eyes and hydrates polymers and gums for thickening products.



Once-Through Processing

For once-through processes, products can be coarsely mixed, and then passed through the rotor stator; or multiple streams can be injected at the inlet of the mixer, and mixed as it passes through the mixer to produce a finished product.

Continuous / Re-Circulation Processing

For recirculating processes, simply connect the mixer to the outlet of your tank or tote, and recirculate your product back to the top of your tank. The mixer can also be mounted on mobile carts, allowing them to be utilized at multiple mix tanks. These in-line mixers can also be offered as part of a complete turnkey system, customized to your process requirements.

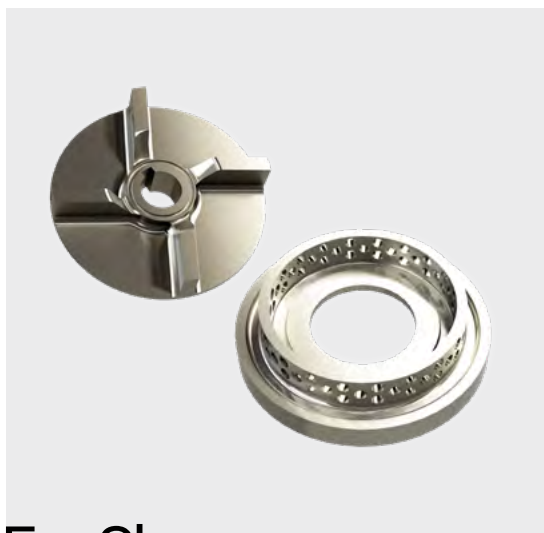
Customize your ShearPro In-Line Mixer with options like...

- XPFC Inverter Rated Motors
- Stainless Steel Washdown Motors
- Standard TEFC Electric Motors
- Single Mechanical Seal
- Double Mechanical Seal
- 3L Seal Reservoir



In-Line Mixing Tools

Our in-line rotor stator mixers can be customized with a variety of mixing tools, offering high shear, high flow, or both to efficiently accomplish your processing goals.



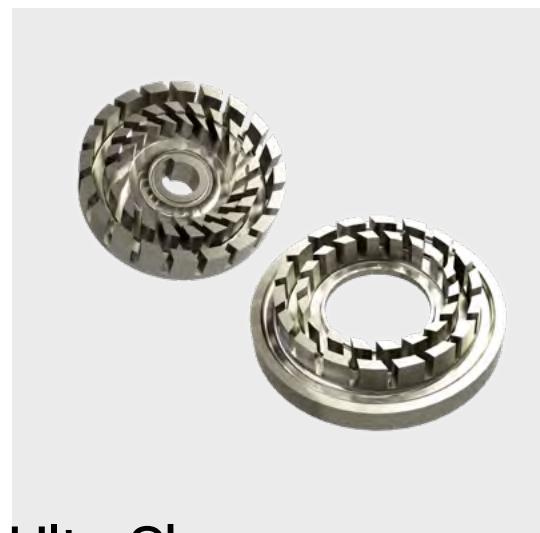
ExoShear

The ExoShear mixing tools are characterized by their straight, four-bladed rotor and the single ring stator with holes of varying diameter. The rotor is designed to maximize the pumping capacity of the mixing tool. These tools are most commonly used for recirculating processes, where high flow rates are required due to the larger batch sizes or when initial particle sizes are too large for other mixing tools. Available in 3 stages of shear.



Pulsor

The Pulsor mixing tools are characterized by their sweeping impeller blades, similar to ones used in centrifugal pumps. These rotors produce high flow rates but their mixing energy is reduced by converting some of the total energy from mixing to the pumping action. Available in 2 shear stages.



UltraShear

The UltraShear mixing tools are characterized by their fine rings of teeth located on both the rotor and stator. The UltraShear tools provide the most mixing energy but the lowest pumping capacity.





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