



WE OFFER

PERFECT MIXING TECHNOLOGIES



COMMERCIAL
AND INDUSTRIAL MIXERS
MANUFACTURER

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POWDER MIXERS



POWDER MIXERS

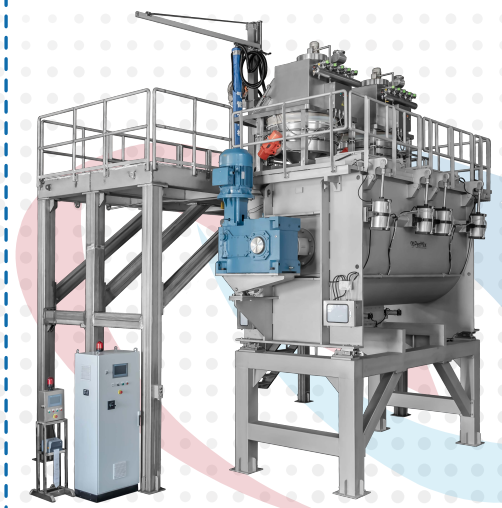
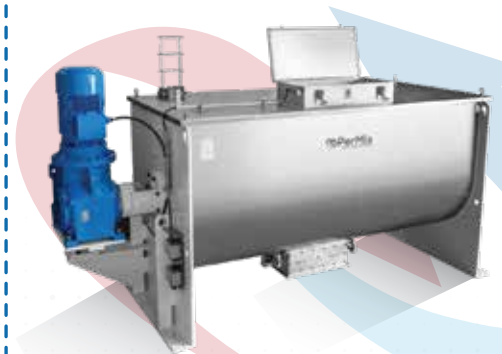
Our powder mixers are engineered for high efficiency and consistent blending of powders and granules. They include:

RIBBON MIXERS (HORIZONTAL & VERTICAL)

PerMix PRB series Ribbon Mixer is an efficient and versatile blending machine for mix-ing of dry powders, granules and viscous pastes homogeneously. It is able to give a satisfying "homogeneity grade" for mixing jobs due to the special design of a mixing agitator with dual ribbons inside of a U-shaped working trough.

PerMix designs our PRB Ribbon Blenders which are able to achieve a maximum "mix-ing ratio" of 1:500,000, which means you can get the desired mixture proportion of components in as small as 1 gram with a batch of 500kg.

- ✓ **Mixing Action:** Ribbon mixers utilize a helical ribbon that rotates around the interior, effectively lifting and folding the material to achieve thorough blending.
- ✓ **Advantages:** Fast mixing times and uniform blending make these mixers suitable for a wide range of powders, ensuring consistent results.
- ✓ **Disadvantages:** They may not be as effective for very fine powders or materials with high bulk density, as the mixing action can be less efficient in these cases.
- ✓ **Efficiency:** Capable of achieving batch mixing in short cycles, these mixers maximize throughput in production environments.
- ✓ **Materials of Construction:** Options include mild steel, stainless steel, Hardox, and titanium, ensuring durability and resistance to wear.



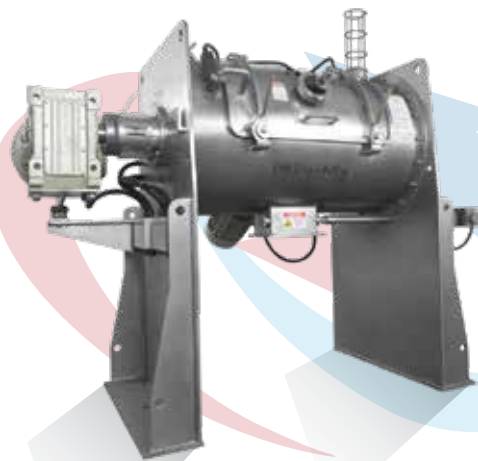
PLOW MIXERS

PerMix PTS series Plow Mixer is one of our two types of Turbulent Mixer, which are originally designed by our Israeli engineers. The other one is PTP series Paddle Mixer. PTS Plow Mixer is so versatile that it can handle nearly all types of materials including dry powders, granular materials, short fibered substances, moist solids with liquids, pasty materials and highly viscous masses.

PerMix PTS series Plow Mixers can be used for numerous processing, including com-pounding, fine mixing, dispersing, suspending, emulsifying, deaerating, tempering, ac-celerating chemical or physical reactions, granulating, breaking down agglomerates, etc. It is particularly suited for such difficult processes as mixing trace elements in pro-portions of 1 in 100,000 to 1 in 1,000,000 parts.



- ✓ **Mixing Action:** Featuring plow-shaped blades, these mixers sweep through the material, promoting aeration and effective agitation for uniformity.
- ✓ **Advantages:** Particularly effective for high viscosity materials, plow mixers minimize product degradation and ensure homogeneity.
- ✓ **Disadvantages:** The more complex design may require higher maintenance and operational oversight.
- ✓ **Efficiency:** Offers excellent mixing efficiency for challenging materials, especially those that are thick or sticky.
- ✓ **Materials of Construction:** Available in stainless steel, Hastelloy, and mild steel to cater to various industrial requirements.



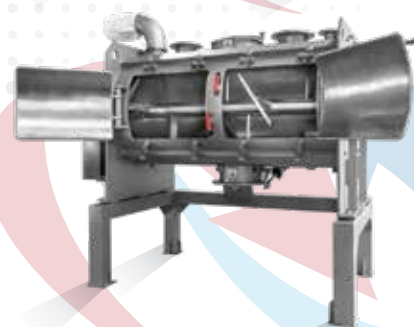
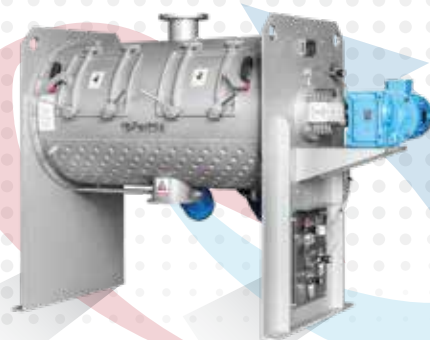
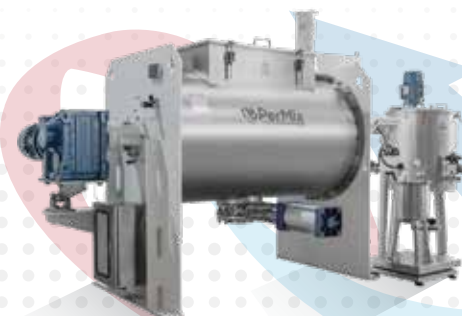
PADDLE MIXERS (HORIZONTAL & VERTICAL)

PerMix PTP series Paddle Mixers are an innovative design derived from the well-known Plow Mixers (or Ploughshare Mixers, Plough Mixers). The Paddle, in many cases, provides the same mixing performance as a Plow but requires much less power consumption; due to the less rotation speed of the paddles, the wearing of the mixing element for the Paddle is also less than the Plow. Paddle Mixers also have a better performance dealing with fragile and/or heat sensitive materials.

Compared with the conventional Ribbon Blenders, Paddle Mixers are superior because they are able to mix the material in a more aggressive way while keeping the similar power consumption, due to the fact that the uniquely designed paddles are more pitched than ribbons in a Ribbon Blender and move more materials in a single turn.

PerMix Paddle Mixers are 'aggressive mixers' that are well qualified for high mixture ratio processes up to 1:1,000,000, which means the single sample of 1 ppm of a batch volume can still have the right mixture of ingredients

- ✓ **Mixing Action:** Paddle mixers utilize wide blades that create a gentle, lifting action ideal for bulk powders and fragile materials.
- ✓ **Advantages:** They provide uniform mixing without damaging the product, making them suitable for a variety of applications.
- ✓ **Disadvantages:** Mixing times can be longer compared to more aggressive mixers, potentially affecting cycle times.
- ✓ **Efficiency:** Highly efficient for bulk powders and fragile materials, ensuring consistent results.
- ✓ **Materials of Construction:** Available in stainless steel, carbon steel, and other materials as needed.



CONICAL MIXERS

PerMix PNA series Conical Screw Mixer is a batch mixing equipment used widely in mixing applications that require gentle mixing with minimal product distortion, minimal heat generation, and very accurate mixing homogeneity. Since it was first developed, it has been recognized as a good solution for the products which is delicate, heat sensitive or tending to segregate.

Due to the reason that PerMix Conical Screw Mixer uses the gravity to generate the significant downward massflow, it saves energy compared with a horizontal mixer. These mixers are also featured with no contamination to the product due to the fact that the shaft sealing & bearing is above the working area, thus no contact with the product.

- ✓ **Mixing Action:** These mixers utilize a conical shape to gently mix materials as they slide down the sides, promoting a gentle blending action.
- ✓ **Advantages:** Ideal for preventing product degradation, making them perfect for heat-sensitive powders.
- ✓ **Disadvantages:** Longer mixing times may be required for certain materials, potentially slowing production.
- ✓ **Efficiency:** Highly efficient for powders that require gentle handling, ensuring even distribution.
- ✓ **Materials of Construction:** Constructed from stainless steel, titanium, and Hastelloy for enhanced durability.

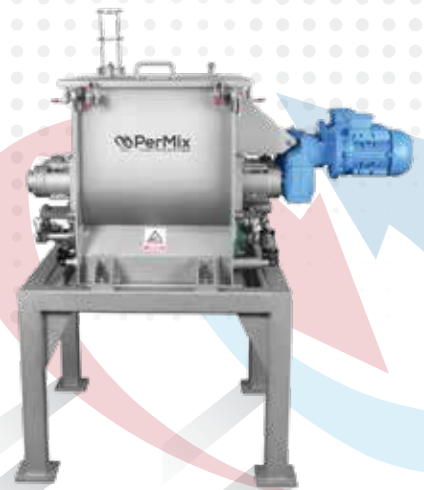


FLUIDIZED ZONE MIXERS (SINGLE AND DOUBLE SHAFT):

PerMix PFB & PFBS series Single or Twin-shaft Paddle Mixer is a fast mixer with high efficiency, which is also known as Fluidizing Mixer, Fluidized Zone Mixer, or Zero-gravity Mixer.

These mixers are applied to prepare a homogeneous mixture despite of particle size, shape and density. When the small amount of powder additives or liquid is required to be added into the bulk material, PFB Mixers are able to achieve fast and precision mixing with high capacity.

Due to its high efficiency and reliable performance, PerMix Twin-shaft Paddle Mixers are widely applied in many industries, including but not limited to: Building materials, Fly ash conditioning, Animal feeds, Mineral premixes, Instant drinks, Milk powders, Vitamin mixes, etc.



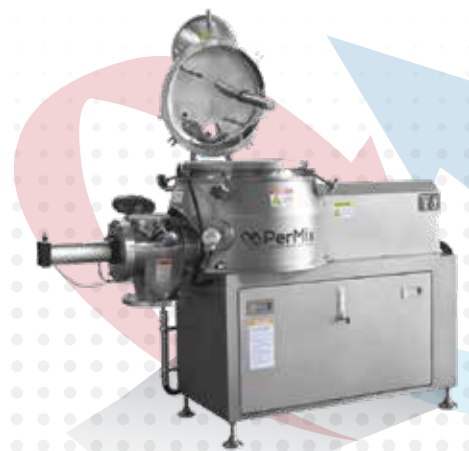
- ✓ **Mixing Action:** By utilizing air or fluid to create a fluidized bed, these mixers enhance mixing and heat transfer efficiency.
- ✓ **Advantages:** Particularly effective for cohesive powders, improving flow characteristics and reducing the risk of segregation.
- ✓ **Disadvantages:** The operation can be complex and may require additional equipment for optimal function.
- ✓ **Efficiency:** Offers high mixing efficiency, especially in processes involving difficult-to-handle powders.
- ✓ **Materials of Construction:** Options include stainless steel, Hardox, and carbon steel for enhanced performance.

HIGH-SPEED GRANULATORS

The PerMix PDI series High Speed Mixer, also called Mixer Granulator, Wet Granulator, or High Shear Mixer Granulator, is an efficient and versatile blending machine for mixing of dry powders, or granulating with the addition of liquid binder, within a very short time and with excellent cleaning abilities. It is able to give perfect result for mixing due to the innovative design of a central Impeller type mixer with a side high speed Chopper.

The proven mixing action of the PerMix PDI series High Speed Mixer ensures effective mixing in many applications. Optimal performance is assured with dedicated designs of optional feeding, discharging and installation.

- ✓ **Mixing Action:** Combining granulating and mixing actions, these mixers utilize high-speed blades to process materials.
- ✓ **Advantages:** Effective for producing granules while maintaining product quality; versatile for various applications.
- ✓ **Disadvantages:** Potential for heat generation during operation, requiring careful monitoring.
- ✓ **Efficiency:** High efficiency in granulating and mixing in a single process step, maximizing throughput.
- ✓ **Materials of Construction:** Typically made from stainless steel and mild steel, designed for durability.

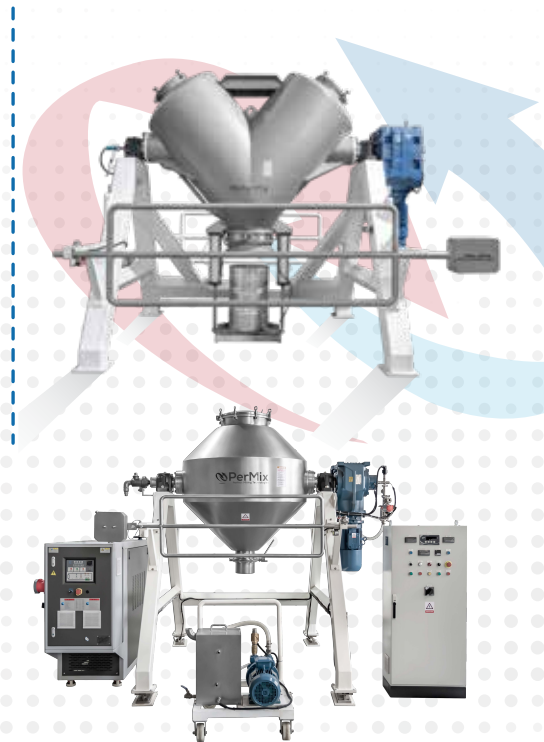


V-BLENDERS & DOUBLE CONE MIXERS

The PerMix PDC series Double Cone Mixers are one type of the well-known Tumbler Mixers, which perform the mixing by turning the vessel around the shaft. They are unique mixers suitable for rapid and uniform mixing of free flowing dry powders, granules and crystals. With the simplest structure among all mixers, they are featured for low investment, easy operation, discharging without residual, quick cleaning, and simple maintenance.

The PerMix PVM series V shaped Mixer (or V Cone Mixer), sometimes also called Y shaped Mixer, is one type of the well-known Tumbler Mixers (the other type is the PerMix PDC series Double Cone Mixer), which are very popular for the intimate blending of free flowing dry powders, granules, and crystals. It is featured by the very simple design and easy to clean construction.

- ✓ **Mixing Action:** The unique shape of these mixers facilitates gentle mixing without causing damage to the materials.
- ✓ **Advantages:** Excellent for blending powders with different particle sizes, resulting in minimal segregation and uniform distribution.
- ✓ **Disadvantages:** Longer mixing times may be required to achieve complete blending, impacting production rates.
- ✓ **Efficiency:** Highly efficient for dry powder blending applications.
- ✓ **Materials of Construction:** Available in stainless steel, Hastelloy, and mild steel.



3D MIXERS

The PerMix PTU series 3D Mixer or Multi Direction Powder Mixer is used for homo-geneous mixing of powdery substances with different specific weights and particle sizes. Producing dry-to-wet and wet-to-wet mixtures is also possible. The production process is hygienic and dust-free because the product is mixed in independent containers of variable sizes.

During the mixing process the powder moves in a random direction from center to the end of the trough and at the same time from top to the bottom. In such a multi-dimensional way, the PerMix PTU series 3D Mixer needs only short mixing time and relatively low power consumption.

The mixer's "Gentle" mixing action is good for final products that are sensitive to high shear of the mixer and tend to break or to reduce their particles size, or are highly abrasives.



- ✓ **Mixing Action:** These mixers provide a three-dimensional motion that enhances mixing uniformity and reduces segregation.
- ✓ **Advantages:** The complex movement ensures thorough blending of powders, making them suitable for a variety of applications.
- ✓ **Disadvantages:** The more intricate design may require higher maintenance.
- ✓ **Efficiency:** Very effective for achieving consistent blends, particularly for powders with different characteristics.
- ✓ **Materials of Construction:** Typically constructed from stainless steel and titanium for enhanced durability.



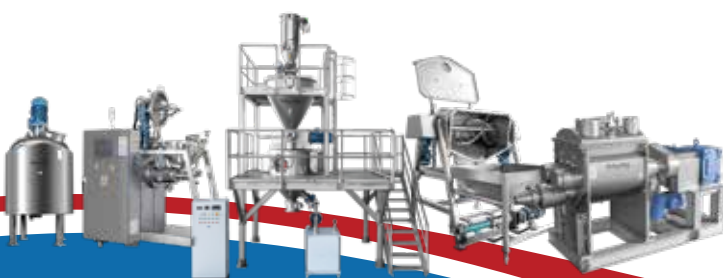
DRUM MIXERS

The PerMix PDR & PDRS series Drum Hoop Mixer has been developed to meet increasing demands for a low batch mixer for mixing, blending, homogenizing, dyeing of dry powders and granules particularly in smaller industries or when frequent product changes as required.

PerMix Drum Hoop Mixers comprise a drive unit with roll-on / roll-off ramp, and it is used in mixing, homogenizing and dyeing of powdery or granulated components in the plastics industry, chemical industry, drug and dye works, food industry as well as textile and leather industry.

Drum capacity of PDR & PDRS Mixer is usually 200L, but also available with 50 and 100 liters, and can go up to 400 liters. Usually the drum is available as standard product in the market; however customized drums are also accepted, and the hoop then needs to be adapted to the drum size.

- ✓ **Mixing Action:** Designed to mix materials directly in drums, these mixers rotate to achieve homogeneity and uniformity.
- ✓ **Advantages:** Simple, cost-effective, and easy to operate, making them suitable for various applications.
- ✓ **Disadvantages:** Limited to smaller batch sizes and may not achieve complete mixing uniformity in all cases.
- ✓ **Efficiency:** Efficient for small-scale mixing tasks, ensuring effective blending.
- ✓ **Materials of Construction:** Made from stainless steel and mild steel to provide durability.



VACUUM MIXERS/DRYERS

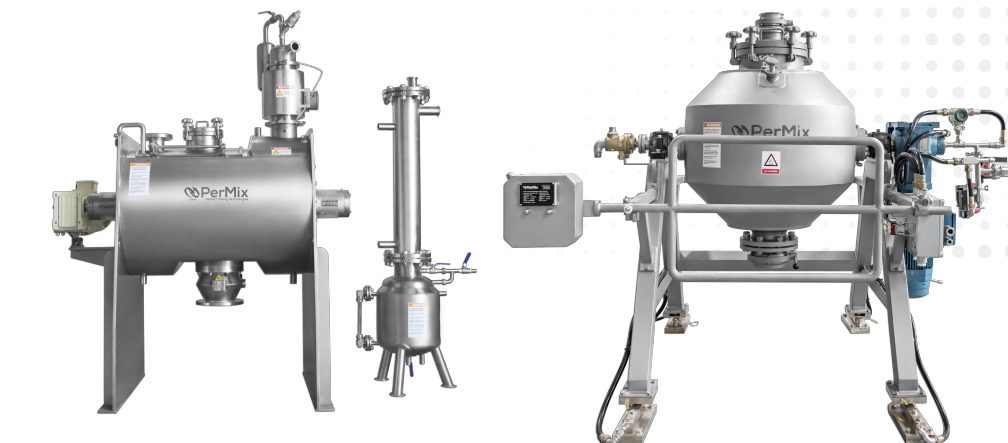
The PerMix series Vacuum Mixer Dryer is a turbulent mixing reactor-dryer. It is used as a high-speed mixer dryer, chemical reactor or, if both processes are combined, as a dryer-reactor. They are used with particular success in agglomeration-free rapid drying, heterogeneous reactions with systems of different substances, extraction, sterilization and in general for vacuum, positive-pressure, thermal energy and comminuting aids.

PerMix series Vacuum Mixer Dryers are widely used in the chemical, met-allurgic and pharmaceutical industries among others. Standard sizes range from 3 liters up to 20,000 liters and pressure up to 50 bar.

With vacuum mixer dryer, drying time is dramatically reduced with products free from agglomerates!

All PerMix Powder Mixers come in an available Vacuum Mixer/Dryer option.

- ✓ **Mixing Action:** These mixers combine vacuum operation with mixing capabilities, enhancing drying while preventing oxidation.
- ✓ **Advantages:** Ideal for sensitive materials, allowing for simultaneous mixing and drying without product degradation.
- ✓ **Disadvantages:** Higher initial investment compared to standard mixers; may require specialized maintenance.
- ✓ **Efficiency:** Very efficient for moisture-sensitive powders, ensuring consistent results.
- ✓ **Materials of Construction:** Available in stainless steel, Hastelloy, and more, providing excellent durability.



PASTE MIXERS



Our paste mixers are specifically designed for handling thick and viscous materials.

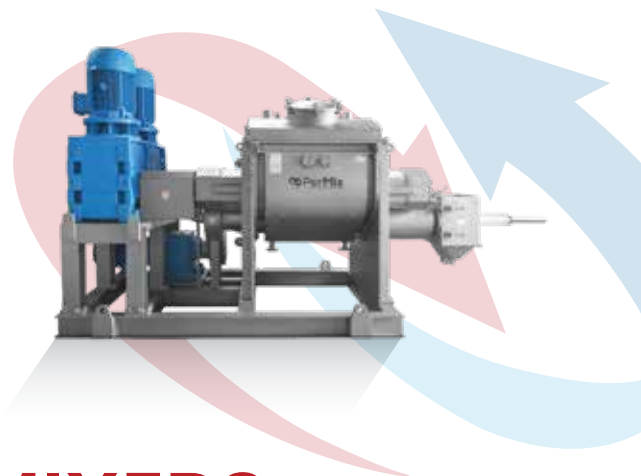
SIGMA MIXERS AND SIGMA MIXERS WITH EXTRUDERS

The PerMix PSG series Sigma Mixer, which is also known as the Double Sigma Mixer, or Double Z Blade Mixer, is used for the mixing-kneading of materials with very high viscosity (over 500,000 cps).

With its unique design of Z-shaped mixing tools installed in two semi-cylinders, the PerMix PSG series Sigma Mixer is able to provide a combined functions of compressing, stretching, folding, kneading & mixing, which makes it widely used in the chemical, food, sealing compound and paint industries, among others. If a screw extruder is applied for discharging, the mixer is also called Sigma Mixer Extruder, or Mixtruder.

PerMix PSG-X Sigma Mixer Extruder (or Mixtruder) is designed with an extrusion screw located in a cylindrical barrel in the middle and below the two mixing arms. The extrusion screw is used to discharge the product, but can also runs in reversed direction during mixing cycle, lifting materials up to the reach of mixing arms, thus assuring a thorough kneading and accelerating the mixing process. The screw has its own separate drive.

- ✓ **Mixing Action:** Employs two sigma blades that rotate in opposite directions to effectively mix and knead thick pastes and doughs.
- ✓ **Advantages:** Provides excellent homogeneity and can incorporate additional materials through the extruder option, enhancing processing versatility.
- ✓ **Disadvantages:** Limited to processing more viscous materials; higher power consumption can lead to increased operational costs.
- ✓ **Efficiency:** Highly efficient for producing consistent blends in dense pastes.
- ✓ **Materials of Construction:** Typically made from stainless steel and Hastelloy, ensuring durability in harsh environments.



DOUBLE PLANETARY MIXERS

The PerMix PDP series Double Planetary Mixer is also called double planetary kneader, because it can be used to handle very viscous materials up to 1,500,000 cPs. Usually the PerMix PDP series Double Planetary Mixer has two vertically mounted mixing tools which are driven by one gear to move around the central axle of the tank as well as their own axis.

The PerMix PDP series Double Planetary Mixer is also called double planetary kneader, because it can be used to handle very viscous materials up to 1,500,000 cPs. Usually the PerMix PDP series Double Planetary Mixer has two vertically mounted mixing tools which are driven by one gear to move around the central axle of the tank as well as their own axis.



- ✓ **Mixing Action:** Features two blades that orbit around a stationary center while mixing, providing thorough mixing and kneading.
- ✓ **Advantages:** Suitable for highly viscous materials, minimizing air incorporation during processing for high-quality results.
- ✓ **Disadvantages:** Slower mixing speeds compared to other types; potential wear on blades may require regular maintenance.
- ✓ **Efficiency:** Highly effective for producing uniform mixtures of pastes and doughs.
- ✓ **Materials of Construction:** Constructed from stainless steel, titanium, and carbon steel for durability and performance.

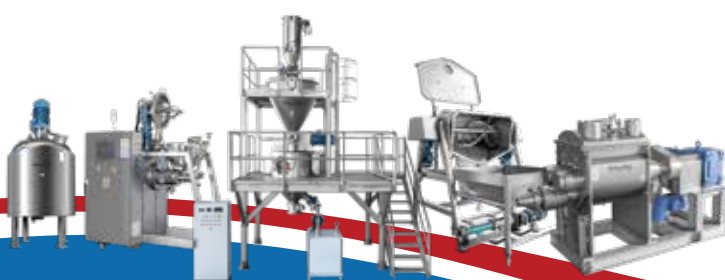


MULTI-SHAFT MIXERS

The PerMix PMS series Multi-shaft Vacuum Mixer is a revolutionary universal multi-processing mixer which is designed to serve a wide variety of industries in many different processes. It provides a unique three-way mixing action by combining slowly running elements with a rapidly running element.

PerMix PMS Multi-shaft Vacuum Mixer therefore is not limited to the simple production of emulsions, suspensions and other homogenous products, but covers the entire manufacturing process - from feeding the components, to the well-deaerated and ready-for-packaging product.

- ✓ **Mixing Action:** Utilizes multiple shafts equipped with various mixing tools, ensuring thorough blending and efficient processing.
- ✓ **Advantages:** Versatile for a wide range of viscosities and materials, ensuring consistent results across diverse applications.
- ✓ **Disadvantages:** More complex design requires careful operational management and maintenance.
- ✓ **Efficiency:** Excellent for achieving consistent blends in variable batch sizes, maximizing production efficiency.
- ✓ **Materials of Construction:** Typically available in stainless steel and Hastelloy to cater to various industrial requirements.



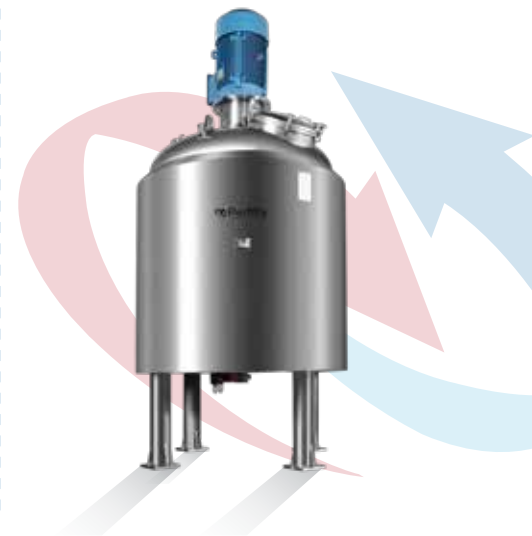
DISPERSION MIXERS

The PerMix PD series High Speed Disperser (or Dissolver) is ideally designed to meet the demands of a broad spectrum of industrial applications for dispersing purpose of solid or liquid materials into liquid body.

PerMix PD High Speed Disperser works with the powerful high speed rotation of the saw disc impeller. Liquid or solid materials are subject to the high shear force at the periphery of the saw disc when the impeller is rotating at high speed, and they are dispersed quickly and efficiently into the liquid body, after short time, homogeneous dispersion is produced.

The ease of operation and high efficiency of PerMix High Speed Dispersers reduce cost and operation time, and have proven themselves by providing the most economical solutions to a variety of dispersing problems

- ✓ **Mixing Action:** Employs high-shear forces to efficiently disperse solids into liquids, creating stable emulsions and suspensions.
- ✓ **Advantages:** Fast and effective, these mixers are ideal for difficult-to-mix materials, ensuring uniform dispersion.
- ✓ **Disadvantages:** Can introduce air into the mixture if not monitored carefully; requires careful operation for optimal results.
- ✓ **Efficiency:** Highly effective for achieving uniform dispersions in a range of applications.
- ✓ **Materials of Construction:** Typically made from stainless steel and carbon steel, designed for durability.

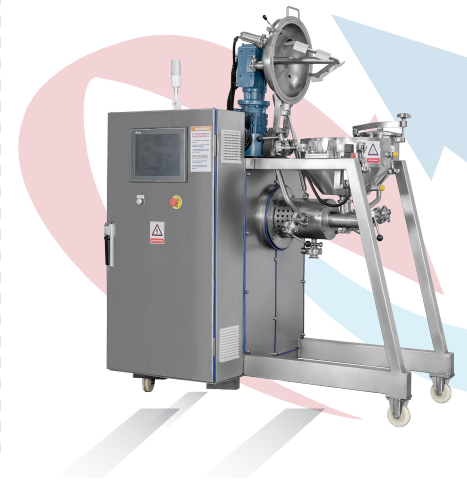


VACUUM EMULSIFIER MIXERS

The PerMix PVC is ideally designed to meet the demands of a broad spectrum of industrial applications for dispersing, homogenizing, & emulsifying purpose of solid or liquid materials into liquid body.

PerMix PVC Vacuum Emulsifier works with the powerful high speed rotation of the center bottom homogenizer. Liquid or solid materials are subject to the high shear force at the periphery of the rotor & stator when the it is rotating at high speed, and they are emulsified quickly and efficiently into the liquid body, after short time, homogeneous dispersion is produced. The scraped surface agitation assists with mixing also, creating the perfect combination of mixing.

- ✓ **Mixing Action:** Employs high-shear forces to efficiently disperse solids into liquids, creating stable emulsions and suspensions.
- ✓ **Advantages:** Fast and effective, these mixers are ideal for difficult-to-mix materials, ensuring uniform dispersion.
- ✓ **Disadvantages:** Can introduce air into the mixture if not monitored carefully; requires careful operation for optimal results.
- ✓ **Efficiency:** Highly effective for achieving uniform dispersions in a range of applications.
- ✓ **Materials of Construction:** Typically made from stainless steel and carbon steel, designed for durability.



LIQUID MIXERS



Our liquid mixers cater to a wide array of applications, ensuring optimal mixing and processing.

IN-LINE HOMOGENIZERS (SINGLE TO THREE STAGE)

PerMix PC series inline mixer is a high shear mixer for inline or continuous operation. In the Inline process, the mixer is installed outside the tank. This makes it easy to be built into an existing production line with normal inlet/outlet connections.

In the case to deal with liquid with a low viscosity, the inline mixer can pump the liquid without an additional pump. That is why it is also called High Shear Pump.

The mixer can be used to deal with the product in a single pass or with several circulations to make the product better.

Different from a batch High Shear Mixer, the mixing occurs in the mixing chamber, thus energy is introduced onto materials in the most efficient way. This also cuts the process times by up to 90% compared with conventional blending methods.

PerMix PC-3 series 3-stage inline mixer has 3 sets of stator/rotor systems to enhance its shearing performance. This design dramatically reduce processing time, and in some cases only one pass through the mixer can lead to satisfied products. They are applied to deal with difficult-to-disperse materials too.

- ✓ **Mixing Action:** Forces liquids through narrow gaps to achieve high shear mixing, ensuring uniformity and particle size reduction.
- ✓ **Advantages:** Produces consistent particle sizes suitable for continuous processing; excellent for large-scale operations.
- ✓ **Disadvantages:** Initial setup costs can be high; requires careful calibration for optimal performance.
- ✓ **Efficiency:** Very efficient for large-scale production with high throughput.
- ✓ **Materials of Construction:** Available in stainless steel and Hastelloy for durability and resistance to corrosion.



EMULSIFIERS (BOTH INLINE & BATCH)

PerMix PC series inline mixer is a high shear mixer for inline or continuous operation. In the Inline process, the mixer is installed outside the tank. This makes it easy to be built into an existing production line with normal inlet/outlet connections. In the case to deal with liquid with a low viscosity, the inline mixer can pump the liquid without an additional pump. That is why it is also called High Shear Pump. The mixer can be used to deal with the product in a single pass or with several circulations to make the product better.



Different from a batch High Shear Mixer, the mixing occurs in the mixing chamber, thus energy is introduced onto materials in the most efficient way. This also cuts the process times by up to 90% compared with conventional blending methods.

The PerMix PVC series Vacuum Emulsifying Mixers are especially designed and used extensively in production of Mayonnaise, Ketchup, Dressings, Chocolate Fill-ings, Chocolate Frostings, Sauces, etc; but can also be applied in the food, cos-metic, chemical and pharmaceutical industries.

PerMix Vacuum Emulsifying Mixers are more than a single emulsifying mixer, but a vacuum mixing, dispersing and emulsifying system that is used whenever a high quality and absolutely air-free product is required as with the PerMix PMS series Multi-shaft Mixer, but at a lower cost.

PerMix PVC Vacuum Emulsifying Mixers cater to various work processes which nor-mally require more machinery in one system. In the PVC Vacuum Emulsifying Mixer, base materials can be mixed in liquids, dispersed and homogenized while at the same time all air is removed. This produces stable emulsions with a long shelf life in storage.

- ✓ **Mixing Action:** Creates stable emulsions through high shear mixing, suitable for both continuous and batch processes.
- ✓ **Advantages:** Excellent for blending immiscible liquids, ensuring high-quality emulsions for various applications.
- ✓ **Disadvantages:** Batch emulsifiers may require longer processing times inline models depend on pump efficiency for optimal results.
- ✓ **Efficiency:** High efficiency in producing stable emulsions, capable of handling varying viscosities.
- ✓ **Materials of Construction:** Typically constructed from stainless steel and Hastelloy, ensuring longevity and hygiene.



MAGNETIC MIXERS

The range of PerMix PM series Magnetic Mixer uses special magnetic driving and non-sealing technology, which is totally different from the common gear-drive agitators.

In a magnetic mixer, the magnetic couplings transmit the torque from the drive to the impeller by the magnet field. No direct touch of the impeller with the drive is necessary therefore no need for the conventional sealing, also they are working nearly without mechanical wear, which makes it possible that these magnetic mixers have much longer duty life with correct design and under proper working conditions.

The mixing head can be equipped with several different mixing elements such as propellers or Rushton turbines.

Biotechnology and fermentation are the most advanced fields of application in process technology. For quite a long time magnetic stirrers take over a leading role in high-tech agitation. There are also demands from other industries for magnetic mixers.



- ✓ **Mixing Action:** Utilizes magnetic fields to rotate an impeller without direct contact with the liquid, providing gentle mixing.
- ✓ **Advantages:** Ideal for sterile applications; minimal contamination risk due to no moving parts in contact with the product.
- ✓ **Disadvantages:** Limited to low viscosity materials; may require specialized setups for optimal performance.
- ✓ **Efficiency:** Efficient for small batch processing, providing consistent mixing results.
- ✓ **Materials of Construction:** Typically made from stainless steel and titanium for corrosion resistance.



SHEAR PUMPS

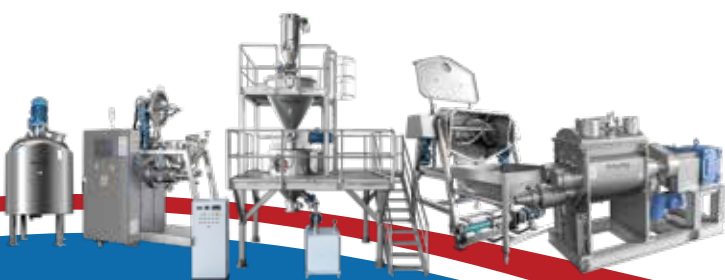
PerMix PCH series Shear Pump combines the advantage of both a centrifugal pump and an inline high shear mixer. It achieves the balance of pumping efficiency and shearing energy.

PerMix Shear Pump has a pair of stator rotor, and the rotor is made of a pumping impeller in the center and a toothed ring. By this design, PerMix Shear Pump can keep a medium shearing performance while give a fairly large pumping capability. When a higher shearing is required, the customer can go for the PerMix PC series Inline Emulsifying Mixer.

PerMix PCH Shear Pump is designed and built in all stainless steel, especially for hygienic applications, for example dairy, food, cosmetics and pharmaceutical industries. PerMix Shear Pump can be easily cleaned with CIP (Clean In Place) system to save time and labor.

By installing an optional hopper or a feeding table, PerMix Shear Pump is converted to a Powder Liquid Mixer, to be able to dissolve/disperse free flowing powder material into light liquid in a quite fast and efficient way.

- ✓ **Mixing Action:** Provides high shear mixing, ideal for emulsifying and mixing thick liquids through specialized impeller designs.
- ✓ **Advantages:** Fast processing times make them effective for a wide range of liquid applications.
- ✓ **Disadvantages:** High shear may not be suitable for all materials, particularly heat-sensitive products.
- ✓ **Efficiency:** Very effective for liquid applications requiring emulsification or homogenization.
- ✓ **Materials of Construction:** Typically available in stainless steel and Hastelloy for durability and corrosion resistance.



POWDER INDUCTION MIXERS

The PerMix PT-C series Powder Liquid Mixer is a family of equipment which are designed for mixing powder into liquid in an efficient way. By a selection of different rotating element, PT-C Powder Liquid Mixer is able to provide various functions of:

I High volume powder induction I Dispersing of "difficult-to-wet" powder,
I Handling the fine dusty powders I Homogenizing I Emulsifying, etc.

PT-C/Q-LS (Double Wall Design, Low Shearing)

The PerMix PT-C/Q-LS series Powder Liquid Mixer is a low shearing equipment which are de-signed for mixing powder into liquid in an efficient way.

The PerMix PT-C/Y series Powder Liquid Mixer has a very specially designed stator/rotor, which works by the principle of a water ring pump, that is able to produce relatively high vacuum; this vacuum makes the PT-C/Y mixer able to suck the powder through a hand-held wand from a bag or other container at ground level. The powder can also be incorporated from a vertical hopper by gravity at a much higher powder sucking rate.

- ✓ **Mixing Action:** Rapidly incorporates powders into liquids using an in-line mixing action, ensuring smooth blends without clumps.
- ✓ **Advantages:** Reduces dust and improves efficiency by minimizing manual handling; effective in continuous processes.
- ✓ **Disadvantages:** Limited to certain powder types; requires precise control for optimal powder incorporation.
- ✓ **Efficiency:** Highly efficient for powder incorporation, ensuring smooth, lump-free liquids.
- ✓ **Materials of Construction:** Constructed from stainless steel and carbon steel to provide robustness.



KETTLES, TANKS, & REACTORS

PerMix, a leading name in the industrial mixing industry, offers a range of industrial kettles designed to handle and process bulk materials efficiently and safely. These kettles are widely used in various industries, including pharmaceuticals, food processing, and chemical processing.

PerMix industrial kettles are known for their robust construction and innovative design. They can be equipped with an enclosure or containment system that prevents the release of dust and contaminants into the surrounding environment.

Tanks and reactors are integral components of PerMix industrial kettles. They are designed with the specific requirements of the industry and the materials being handled in mind. A mixing tank is primarily used for blending different components or substances, while a reactor is a vessel specifically designed for carrying out chemical reactions.

The design of these tanks and reactors focuses on optimizing the blending process, ensuring thorough and consistent mixing of the ingredients. They are constructed to withstand the harsh conditions of chemical reactions, often requiring materials that can resist high temperatures, pressure, and corrosive substances.

- ✓ **Mixing Action:** Designed for heating, cooling, and storing liquids, these vessels can be equipped with integrated mixing capabilities for effective processing.
- ✓ **Advantages:** Versatile and customizable for various applications, allowing for a range of processes from mixing to reaction.
- ✓ **Disadvantages:** Requires proper setup for specific processes, which may increase initial investment.
- ✓ **Efficiency:** Very effective for liquid processing, ensuring optimal mixing and heat transfer.
- ✓ **Materials of Construction:** Typically available in stainless steel, carbon steel, and Hastelloy for enhanced durability.



OTHER EQUIPMENT



This category includes specialized equipment designed to enhance your mixing processes:

DE-LUMPERS AND LUMP BREAKERS

- ✓ **Mixing Action:** Breaks down agglomerated material into uniform particles, ensuring smooth flow and consistent quality.
- ✓ **Advantages:** Essential for improving product quality and flow characteristics, preventing blockages in processing lines.
- ✓ **Disadvantages:** Depending on the model, it may require more power and maintenance.
- ✓ **Efficiency:** Efficiently handles a variety of materials, ensuring smooth processing.
- ✓ **Materials of Construction:** Typically made from stainless steel and carbon steel for durability.



CONTINUOUS DEAERATORS

Processing of liquid products often incorporates air and unwanted gases into the product. These gases normally cause problems such as oxidation, discoloration, inconsistency, bad smell and filling difficulties. The PerMix PDA series Vacuum Deaerator, or Degasser, is a totally compact sanitary device designed for the continuous automatic removal of air or other occluded gases from any type of liquid or paste, by means of vacuum.

PerMix PDA Vacuum Deaerators can handle numerous processes including (but not limited to) the manufacturing of food products, cosmetics and chemicals, which requires to avoid air oxidation to ensure a correct preservation or application. End products can be sauces, fruit pulp, cosmetic creams, syrups, PVC dispersions, lu

- ✓ **Mixing Action:** Removes air from liquids using a continuous flow system, improving product stability and quality.
- ✓ **Advantages:** Effective for maintaining product integrity; crucial in applications sensitive to oxidation.
- ✓ **Disadvantages:** Initial setup and operational costs may be higher compared to batch systems.
- ✓ **Efficiency:** Highly efficient for large-scale operations requiring consistent quality.
- ✓ **Materials of Construction:** Made from stainless steel to ensure durability and hygiene.



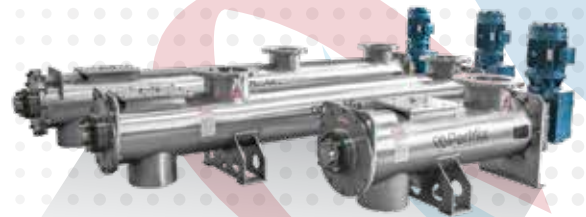
OSCILLATING GRINDERS

- ✓ **Mixing Action:** Uses oscillating motion to finely grind materials while minimizing heat generation.
- ✓ **Advantages:** Ideal for producing fine powders with minimal impact on the material's properties.
- ✓ **Disadvantages:** More suited for smaller batches, which can limit scalability.
- ✓ **Efficiency:** Highly effective for fine grinding applications, ensuring consistent results.
- ✓ **Materials of Construction:** Typically made from stainless steel for durability and resistance to corrosion.



AUGER CONVEYORS

- ✓ **Mixing Action:** Moves bulk materials through a helical screw, providing controlled transfer of products from one point to another.
- ✓ **Advantages:** Versatile for various materials and applications; can be configured for different lengths and inclines.
- ✓ **Disadvantages:** Limited to specific bulk densities and may not be suitable for fragile materials.
- ✓ **Efficiency:** Efficient for transporting materials over short to medium distances.
- ✓ **Materials of Construction:** Available in stainless steel and carbon steel for durability.



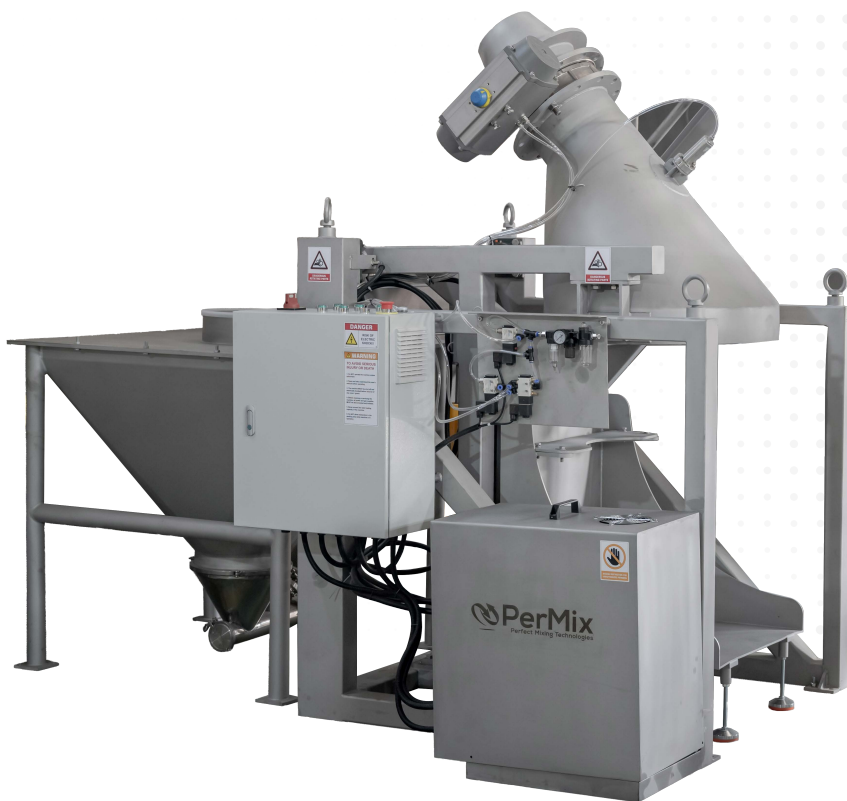
DRUM LIFTERS/DUMPERS

- ✓ **Mixing Action:** Facilitates the safe lifting and dumping of bulk materials from drums, ensuring efficient loading into mixers or other equipment.
- ✓ **Advantages:** Enhances efficiency and safety in material handling; reduces manual labor.
- ✓ **Disadvantages:** May require more space for operation and additional training for safe use.
- ✓ **Efficiency:** Increases operational efficiency by speeding up the loading process.
- ✓ **Materials of Construction:** Typically made from mild steel and stainless steel to ensure longevity and strength.



DRUM LIFTERS/DUMPERS

Room for additional products may be added as needed, ensuring that PerMix continues to innovate and meet industry demands.





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