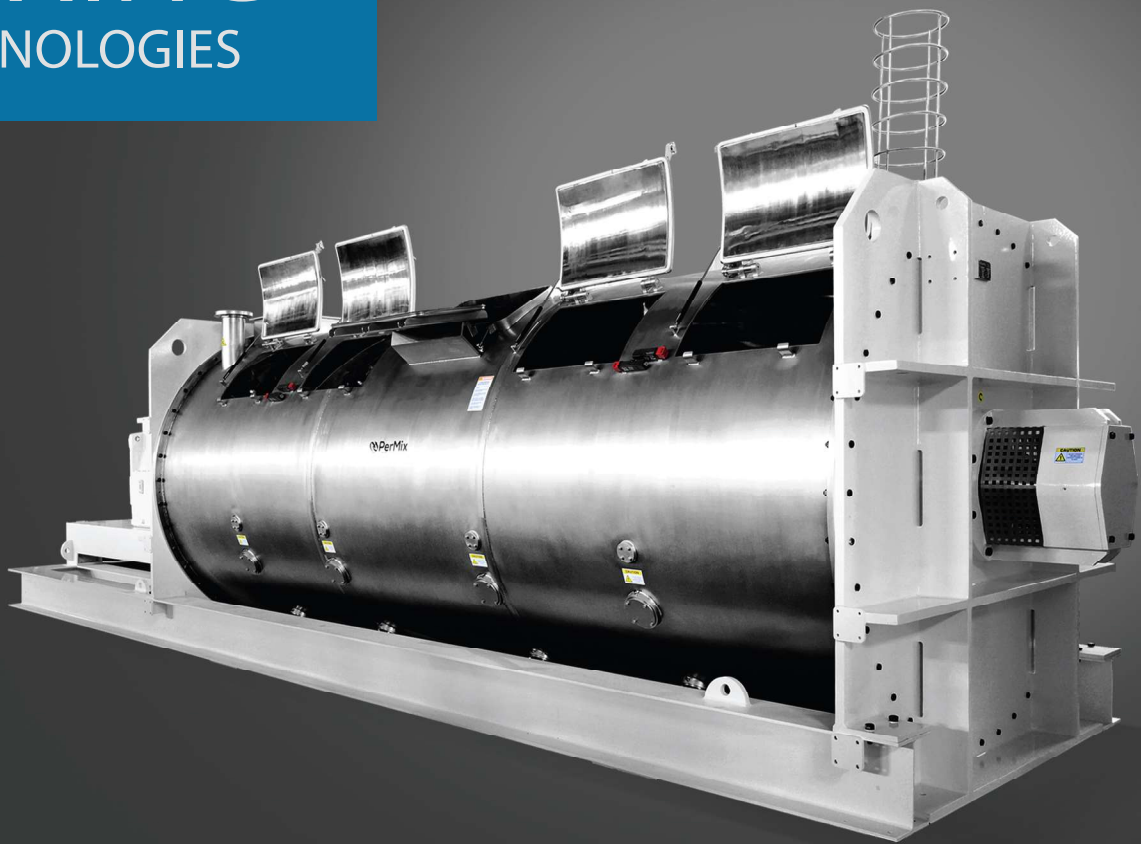


WE OFFER  
PERFECT  
MIXING  
TECHNOLOGIES



PHARMACEUTICAL



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FOOD



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HEALTH & BEAUTY

**PTP** PADDLE MIXER

## PTP - PADDLE MIXER



PerMix PTP series Paddle Mixers are an innovative design derived from the well-known Plow Mixers (or Ploughshare Mixers, Plough Mixers). The Paddle 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 Plows. Besides, PerMix Paddle Mixers have a better performance dealing with the viscous/sticky materials, such as slurries, which is because the plough-shaped mixing elements tend to be wrapped by the viscous materials while the paddles don't.

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.

The main difference between our PTP Paddle Mixer and PTS Plow Mixer is the mixing element: PTS Mixer uses the plough-shaped element, while PTP Mixer uses the paddle element. PerMix PTP Paddle Mixers can be used wherever the Plow Mixers are used, including but not limited to compounding, fine mixing, dispersing, suspending, emulsifying, deaerating, tempering, accelerating chemical or physical reactions, granulating, breaking down agglomerates, etc.

Both Paddle and Plow 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.

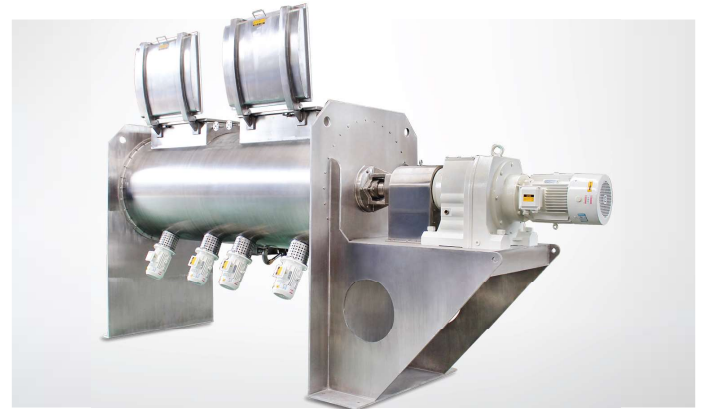
## LAB & PILOT MODELS

PerMix designs the full range of paddle mixers, including the lab size (5L full) & pilot size (up to 45L full) models for Research & Development purpose. The small size machine is very helpful for customers when the ingredients for R&D are expensive, thus helping our customer to save their limited budget at the first stage. With the good performance of the lab & pilot mixer, it is easy to scale up for a medium size or even bigger one.

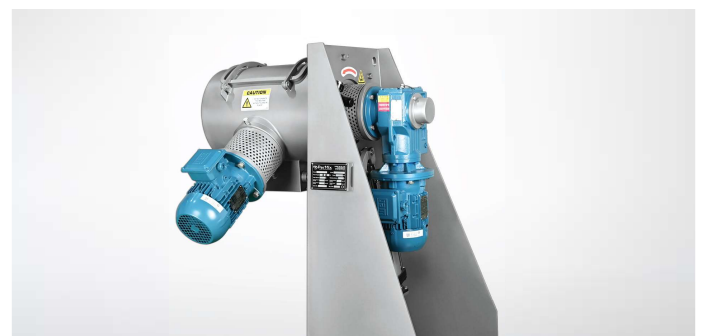


## DESIGN WITH CHOPPERS

The installation of PerMix Multi-chopper in the basic PTP powder mixer enables the breaking down of agglomerates during the mixing process.



Together with the mixing element, the PerMix Multi-chopper removes lumps in the initial product, chops pasty adhesives and hinders the formation of agglomeration during the moisturing of powdered substances. The PerMix Multi-chopper is operated independently by its own motor.



## OPTIONAL FEATURES

### • Interchangeable mixing element

PerMix can design the mixer to work with interchangeable mixing tool of both paddles and plows, supplying versatility while keeping a relatively low budget for our customer. Both plough (for PTS Mixer) and paddle (for PTP Mixer) have their own advantages: the plough-shaped element shortens the mixing time, and can easily penetrate through the dense and thick powder or paste materials, while the paddle element provides more gentle mixing with less heat generated which is good for temperature sensitive materials.

### • Continuous operation

PerMix supplies mixers for continuous work when a large capacity per hour is needed for the same material. Continuous paddle mixers differ from batch paddle mixers in that the mass flow of the product is from the inlet of the container to the discharge at the opposite end.

### • Heating/Cooling jacket

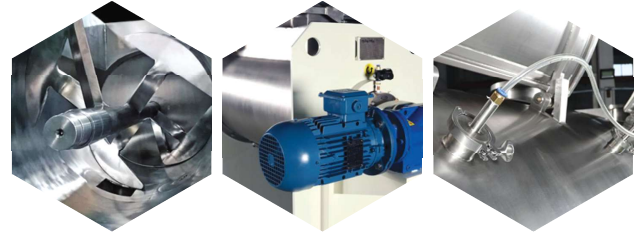
Jacketed vessel for heating/cooling operation by steam, thermal oil, or water. ASME/PED certificate can be optional for high pressure operation.

### • Feeding & Discharging

A variety of feeding & discharging methods can be selected by the customers. Discharging port can be by manual or pneumatic operation.

### • Access door

Access doors can be designed for easy cleaning, inspection & maintenance., with safety switch to prevent human injury.



### • Construction material

We are able to offer mixers with contact part to be built by Carbon steel, SS304, SS316/316L, Titanium, Duplex stainless steel, Hastelloy, etc. For abrasive materials we offer hardened steel as the contact part, or the mixing elements to be coated with materials such as Tungsten Carbide or equivalent.

### • Drive system

Drive system by geared motor, cycloidal reducer, worm reducer, belt or chain transmission, etc.

### • Extended machine bases

Discharge clearance of PerMix mixers are designed according to customer's requirement, with extended machine bases, tubular frames, platform, etc.

### • Spray nozzle

Liquid can be added into the powder by spray nozzles on a pipe which is installed on the top of the mixing vessel. The necessary pump and tank can also be provided by PerMix.

## SPECIFICATIONS

Model	Total capacity (liter)	Working capacity (liter)	Power (*) (kW)	Speed (*) (RPM)	H1 (*) (mm)	L (mm)	W (mm)	H (mm)	Weight (kg)
PTP-5L	5	3	1.1	365	320	900	400	600	110
PTP-10L	10	7	1.1	365	300	950	400	600	120
PTP-45	45	30	1.1	90	700	940	850	1,160	260
PTP-70	70	45	1.5	63	620	1,150	980	1,250	550
PTP-100	100	70	1.5	63	620	1,300	1,000	1,280	600
PTP-200	200	140	2.2	53	610	1,590	1,110	1,370	700
PTP-300	300	210	3	50	620	1,750	1,140	1,460	800
PTP-500	500	350	4	50	610	1,990	1,280	1,570	1,050
PTP-750	750	500	5.5	50	610	2,247	1,370	1,670	1,240
PTP-1000	1,000	700	7.5	35	150	2,410	1,450	1,360	1,450
PTP-1500	1,500	1,000	11	35	150	2,780	1,590	1,410	1,850
PTP-2000	2,000	1,400	15	35	180	3,020	1,700	1,550	2,550
PTP-3000	3,000	2,100	18.5	35	180	3,285	1,860	1,780	3,100
PTP-4000	4,000	2,800	22	30	180	3,710	2,080	1,900	4,100
PTP-5000	5,000	3,500	30	30	180	3,950	2,210	2,000	4,700

- PTP-L: laboratory size
- kW/rpm are product dependent and might vary. H1 (discharge height) can be designed according to request.
- All specifications and illustrations are as accurate as is reasonably possible, but they are not binding.
- PerMix reserves the right to modify the design without notice.

## VACUUM MIXER DRYER

With some special modification, the PerMix PTP series Paddle Mixer can be used as a multi-stage process vessel eliminating the need for additional specialist equipment. It can be used as a mixer-dryer, mixer granulator, deaerator, reactor and cooler.

Contact us to find more information about the unique PerMix PTPD series Vacuum Mixer Dryer.

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Besides, PerMix have been building a network of agents located in Europe (Germany, Denmark, UK, Belgium, France, Spain, Poland, etc), Asia (South Korea, Indonesia, Thailand, Malaysia, Singapore), and several other countries.

