

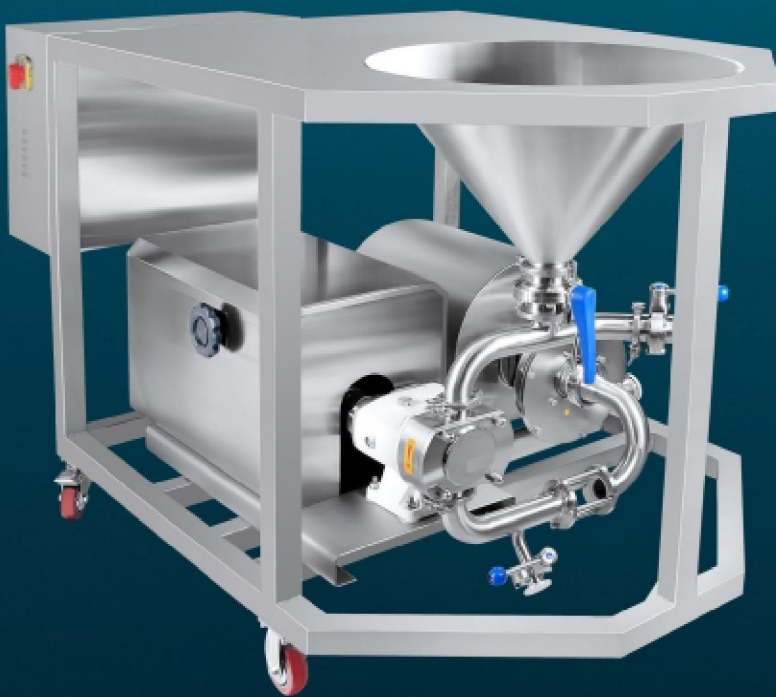
**SEPAK**

**INDUSTRIES PTY LTD**



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# Mixing pump series



1/105-107 STANLEY RD, INGLEBURN, 2565  
PHONE: +61 2 9618 1455  
WEBSITE: [WWW.SEPAK.COM.AU](http://WWW.SEPAK.COM.AU)  
EMAIL: [SALES@SEPAK.COM.AU](mailto:SALES@SEPAK.COM.AU)

# PMTU Series mixing pump



Solution for emulsification, homogenization, refining, mixing, adjustable, multi-tasking, mixing powder and liquid



The PM series is a multifunctional material-liquid mixing pump with functions of mixing, shearing, emulsifying, homogenizing, differentiating, refining, crushing and material improvement. Compared with the traditional production process, the pump is more simple, convenient and economical, which improves the production efficiency and the quality of the materials to be treated.

Mainly applied to: food, beverages, dairy products, additives, personal care, biopharmaceuticals, thickeners, industrial applications and so on.



A=Lobe pump  
B=Emulsified homogeneous pump

## Technical Specifications

Max powder processing capacity	9000kg/h
Max thickeners processing capacity	3000KG/h( Base on material's viscosity and density)
Max temperature	130°C
Material	304 /316L, 1.431/1.4404, ASME BPE 316L , 1.4435 NB2 Fe≤0.5%
Surface treatment	≤ Ra0.8 μ m, ≤ Ra0.6 μ m, ≤ Ra0.4 μ m
Mechanical seal	Single and double mechanical seals
Mechanical seal combination	See configuration table
Inlet/Outlet connection	Thread, clamp, flange, Aseptic flange
Certification	3-A-02-11(N.O.1579); MD/06/42-EC (N.O.70521616101-00); FDA 177.2600; USP CLASS-II; EG/VO1935/2004;

# PMTU Series mixing pump

## TUR series lobe pump

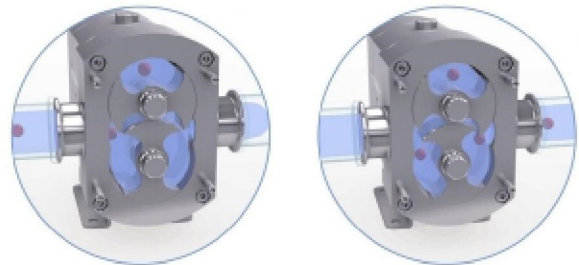


TUR lobe pump pumping power and liquid from batching tank to chamber for pretreatment and sent to the emulsified homogeneous pump.

### Lobe pump has multiple options:

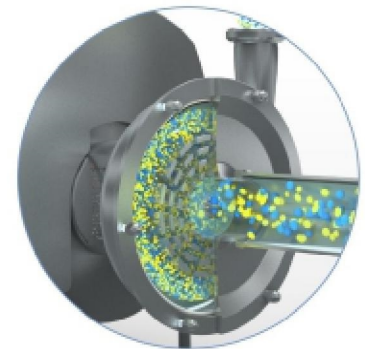
TU series=standard configuration

STU series=stainless steel gear case configuration



## JZ1 Emulsified homogeneous pump

Jz1 series pumps are capable of emulsifying, homogenizing, refining, dispersing, crushing and mixing complex components such as stabilizers, thickeners, gels, flavors, sugars and other additives. Its powerful mixing function enable the material to achieve the high consistency, and improves the material quality.



Stator

Rotor

Gap between stator and rotor is 0.5mm

# Typical applications



## Food & beverage

Juice, jam, ice cream, dairy products, food additives, tea drinks, chocolate, soymilk, essence, salad dressing, chili sauce, mayonnaise, tomato sauce, mustard, yogurt, sour cream, flavored milk, pudding and other types of materials



## Daily chemical

Liquid detergent, liquid soap, facial cleanser, emulsified silicone oil, fragrance compound, skin care product, cosmetics, cream, shampoo, shower gel, etc.



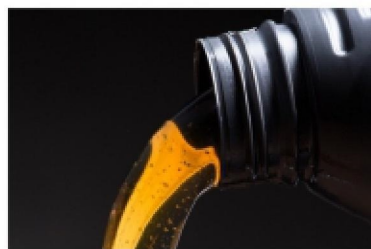
## Bio-pharmaceutical

Injection, antibiotic, drug emulsion, medicine cream paste, health care products, microcapsule emulsification, lotion, cell tissue breakage etc.



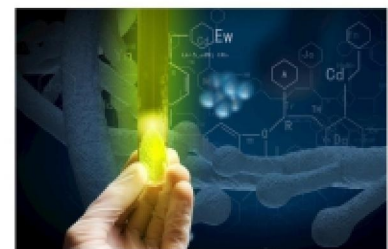
## Additives and thickeners

Aspartame, non-skimmed milk powder, salt, citric acid, sugar, egg powder, whey protein concentrate, calcium carbonate, honey, powder essence and other additives, gels, pectin, synthetic thickeners, starch, gelatin and other thickeners.



## Petrochemical industry

Lubricant, heavy oil emulsification, diesel oil emulsification, modified asphalt, catalyzer, wax emulsion etc. Which media need to be emulsified and homogenized.



## Fine chemical engineering

Pigment, dyestuff, plastic additive, textile assistant, adhesive, resin emulsification, hot melt adhesive, sealant, glue, sizing agent, finishing agent, surfactant, dye leveler, carbon black dispersion, anti-bleeding agent, textile finishing agent, brightener, leather auxiliaries, pigment paste etc. Which media need to be emulsified and homogenized.



## Coating & ink

Printing ink, oil paint, emulsion paint, coating, nanopaint, photocurable coating, coating adhesive, carbon black dispersion, glaze, bentonite, dye compounds etc.



## Pesticide

Insecticide, herbicide, pesticide missible oil, fertilizer, inert ingredient etc which media need to be emulsified and homogenized.



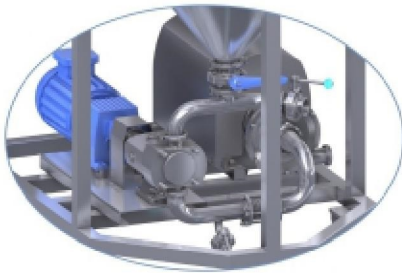
## Semiconductor

Dispersion & depolymerization of nanometer materials etc.

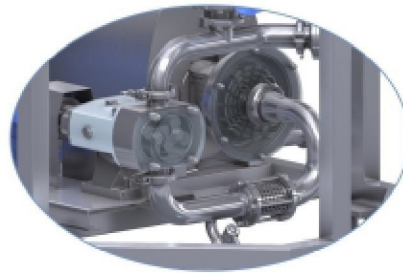
## PMTU Series mixing pump



Simple, flexible,  
economical, efficient



Powder and liquid are strongly sucked into the pump chamber



The material is being homogeneously mixed



The homogeneous mixture is delivered to the tank equipment

### Very Simple And Clear Piping Layout

- Multiple tasks can be handled simultaneously.
- Ratio between liquid and powder is adjustable.
- The powder inlet is designed with a valve that controls the amount of powder inhaled. The valve can be manual and pneumatic.
- The liquid inlet is designed with a valve that controls the flow of liquid inhaled.
- The side of the hopper is designed with a vibrator to prevent the powder from accumulating and agglomerating.
- The hopper can be configured with tuning fork sensor. When work automatically, the sensor can prevent mixture ratio from inconsistent caused by low amounts of powder, and also can prevent the powder from overflowing.



Simple, flexible and economical



Sensor



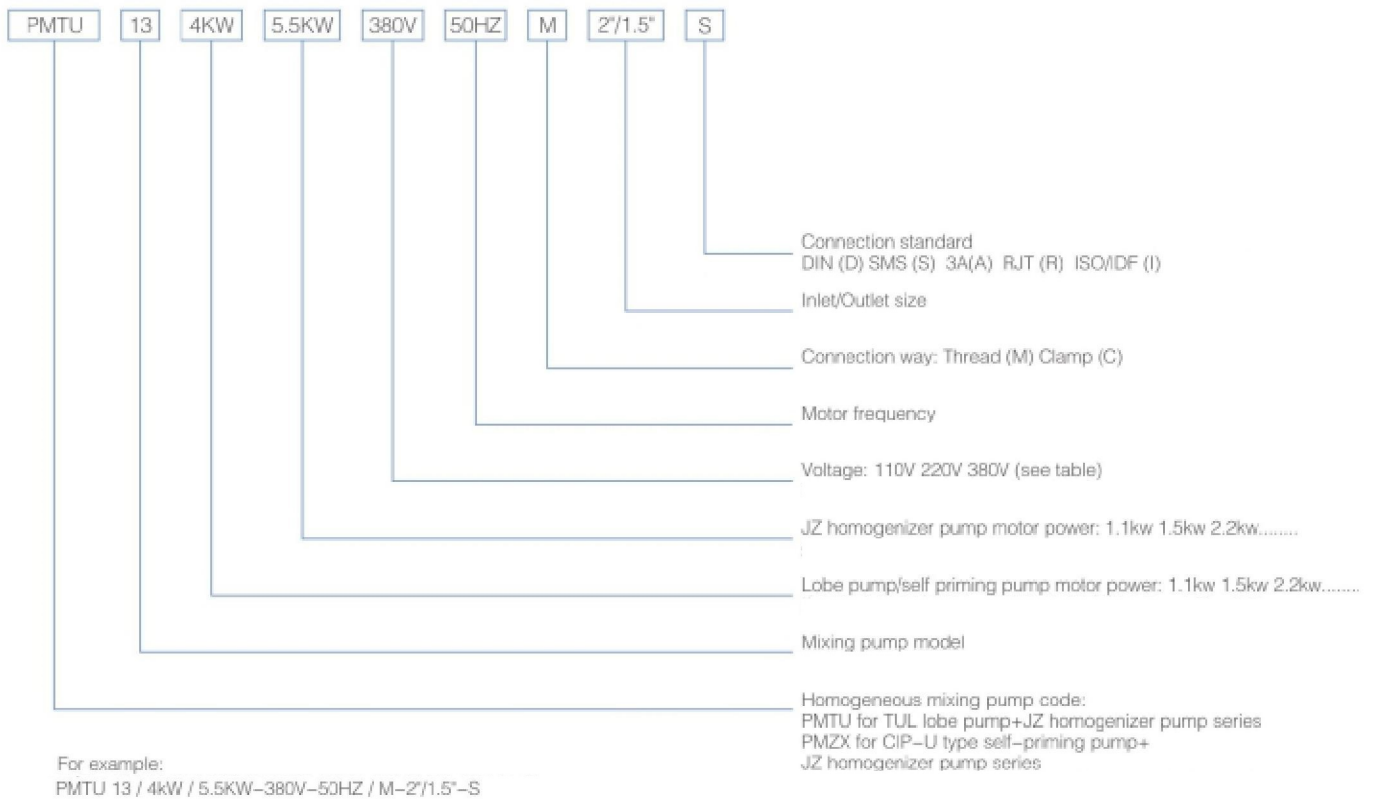
Vibrator and valve



### **Very Simple and Clear Electrical Control Layout**

- Lobe pump, can control speed by frequency inverter to achieve the purpose of controlling the flow.
- Homogeneous pump, can control speed by frequency inverter to achieve the effect of homogenization and mixing, meanwhile control the flow.
- Console, designed with motor overload protection to prevent motor from being burned.
- Console, the shell is designed with work indicator, can distinguish working condition through the light.

# PMTU Mixing pump model instruction



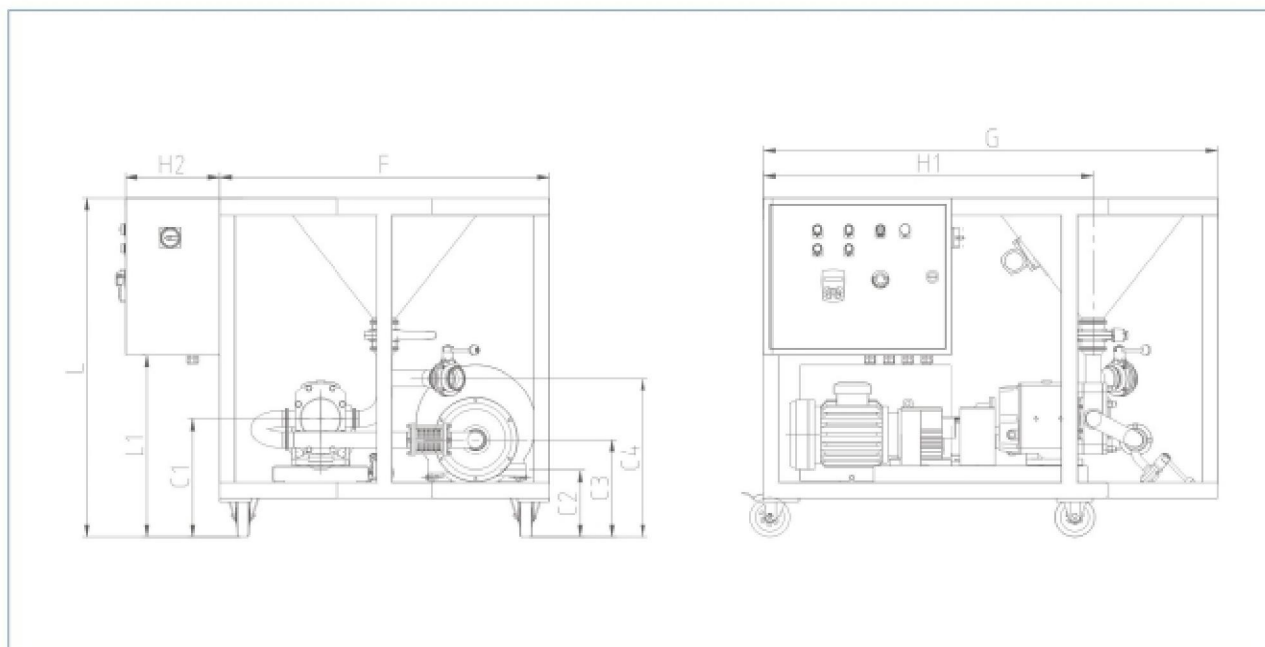
## PMTU Mixing pump selection table



Homogeneous mixing pump	Lobe pump		Emulsifying homogenizing pump		Powder Capacity-KG/h			Inlet	Outlet	Hopper capacity (L)	Weight (kg)
	Speed (0-1450-MIN)		Speed (2950-MIN)		Granulated sugar	Skim milk protein powder	Thickener powder (base on grade & density)				
	Lobe pump (model)	Power (KW)	Homogenizing pump (model)	Power (KW)							
Model											
PMTU-13	TUR-25	4.0	JZ1-130	5.5	0-500	0-450	100-200	2"-DN50	1.5"-DN40	45L	563
PMTU-15	TUR-30	4.0	JZ1-150	7.5	0-1000	0-900	200-400	2"-DN50	1.5"-DN40	45L	606
PMTU-17	TUR-35	5.5	JZ1-170	11	0-1800	0-1600	300-500	2"-DN50	2"-DN50	45L	702
PMTU-19	TUR-60	7.5	JZ1-190	15	0-3500	0-3200	600-1200	3"	2"-DN50	65L	436
PMTU-21	TUR-70	11.0	JZ1-210	18.5	0-5000	0-4500	1200-2000	3"-DN80	2.5"-DN65	65L	1016
PMTU-24	TUR-100	15.0	JZ1-240	22	0-10000	0-9000	1500-3000	4"-DN100	2.5"-DN65	65L	1076

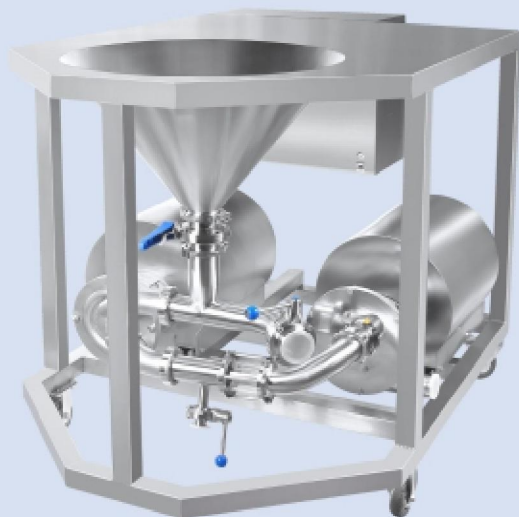


## PMTU Series mixing pump data chart



Series	Assembly dimensions									
	C1	C2	C3	C4	F	G	H1	H2	L	L1
PMTU-13	413.5	278.5	355	559.5	1050	1750	1050	300	1124	624
PMTU-15	436.5	257	355	569	1050	1750	1050	300	1124	624
PMTU-17	436.5	283.5	384	569	1050	1750	1050	300	1124	624
PMTU-19	436.5	256.5	384	569	1050	1750	1050	300	1124	624
PMTU-21	554	243	384	493.5	1050	1750	1050	300	1124	624
PMTU-24	554	243	404	493.5	1050	1750	1050	300	1124	624

# PMZX series mixing pump



Solution for emulsifying, homogenizing, refining, mixing, adjusting, multi-tasking, powder and liquid mixing.



The PM series mixing pump is for mixing material and liquid with multi-functions ,such as mixing, shearing, emulsifying, homogenizing,dispersing, refining, crushing and material improvement. Compared with the traditional production process, the pump is more simple, convenient and economical, which improves the production efficiency and the quality of treated materials.

Mainly used in: food, beverage, dairy products, additives, personal care, biopharma, thickeners, industrial applications, etc.



A=Liquid ring type self-priming pump  
B=Homogeneous mixing pump

## Technical Specifications

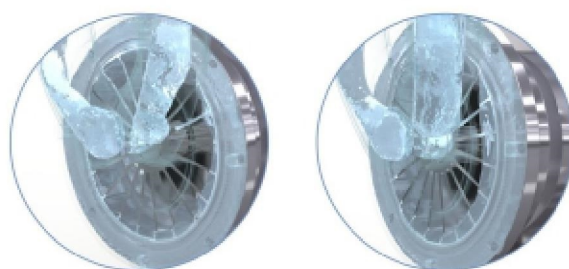
Max capacity of powder	9000kg/h
Max capacity of thickeners	3000kg/h(Depends on the viscosity and concentration of the material)
Max temperature	130°C
Material	304 /316L, 1.4301/1.4404,ASME BPE 316L , 1.4435 BN2 Fe≤0.5%
Surface treatment	≤ Ra0.8 μ m, ≤ Ra0.6 μ m, ≤ Ra0.4 μ m
Mechanical seal	Single and double mechanical seals
Mechanical seal combination	See configuration table
Inlet/Outlet connection	Thread, Clamp, Flange, Aseptic flange
Certification	3-A-02-11(N.O.1579); MD/06/42-EC (N.O.70521616101-00); FDA 177.2600; USP CLASS-II; EG/VO1935/2004;

## PMZX series mixing pump

### CIP series self priming pump

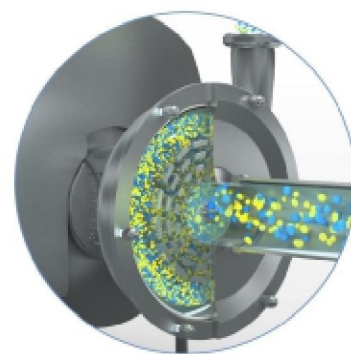


CIP Series liquid ring type self-priming pump has super strong self-priming ability, and negative pressure can reach 0.8bar, the powder and liquid are sucked into the chamber from the dosing tank for pretreatment, and then they're transported to emulsification homogenization pump.



### JZ1 Emulsification homogenization pump

JZ1 Series pumps can be used for emulsifying, homogenizing, refining, dispersing, crushing and mixing of various complex components such as stabilizers, thickeners, gels, flavors, sugars and other additives. And the strong mixing ability makes the materials reach high consistency and improves the quality of materials.



Stator

Rotor

Gap between stator and rotor is 0.5mm

# Typical applications



## Food & beverage

Juice, jam, ice cream, dairy products, food additives, tea drinks, chocolate, soy milk, essence, salad dressing, chili sauce, mayonnaise, tomato sauce, mustard, yogurt, sour cream, flavored milk, pudding and other types of materials



## Daily chemical

Liquid detergent, liquid soap, facial cleanser, emulsified silicone oil, fragrance compound, skin care product, cosmetics, cream, shampoo, shower gel, etc.



## Bio-pharmaceutical

Injection, antibiotic, medicine emulsion, medicine emulsifiable paste, health care products, microcapsule emulsification, lotion, cell tissue smash etc.



## Additives and thickeners

Aspartams, non-skimmed milk powder, salt, citric acid, sugar, egg powder, whey protein concentrate, calcium carbonate, honey, powder essence and other additives, gels, pectin, synthetic thickeners, starch, gelatin and other thickeners.



## Petrochemical industry

Lubricant, heavy oil emulsification, diesel oil emulsification, modified asphalt, catalyzer, wax emulsion etc. Which media need to be emulsified and homogenized.



## Fine chemical engineering

Pigment, dyestuff, plastic additive, textile assistant, adhesive, resin emulsification, hot melt adhesive, sealant, glue, sizing agent, finishing agent, surfactant, dye leveler, carbon black dispersion, anti-sticking agent, textile finishing agent, brightener, leather auxiliaries, pigment paste etc. Which media need to be emulsified and homogenized.



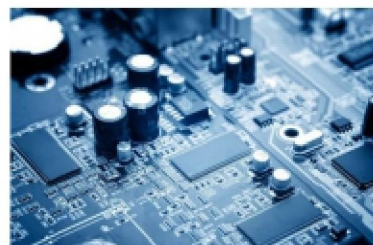
## Coating & ink

Printing ink, oil paint, emulsion paint, coating, nano-paint, photocurable coating, coating adhesive, carbon black dispersion, glaze, bentonite, dye compounds etc.



## Pesticide

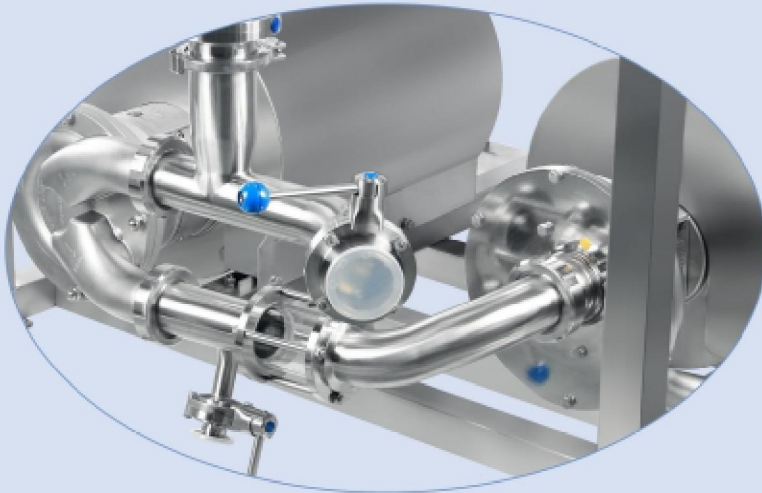
Insecticide, herbicide, pesticide missible oil, fertilizer, inert ingredient etc which media need to be emulsified and homogenized.



## Semiconductor

Dispersion & depolymerization of nanometer materials etc.

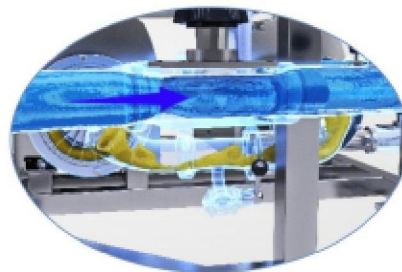
## PMZX series mixing pump



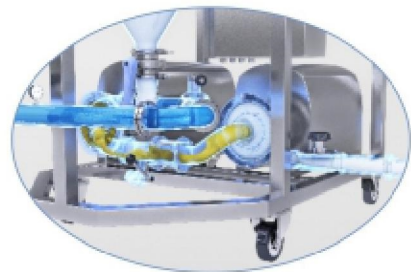
Simple, flexible,  
economical, efficient



Powder and liquid are strongly sucked  
into the pump chamber



The material is  
being homogeneously mixed



The homogeneous mixture is transported  
to the tank equipment

### Very Simple And Clear Piping Layout

- Multiple tasks can be handled simultaneously.
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- The liquid inlet is designed with a valve that controls the flow of liquid inhaled.
- The side of the hopper is designed with a vibrator to prevent the powder from accumulating and agglomerating.
- The hopper can be configured with tuning fork sensor. when work automatically, the sensor can prevent mixture ratio from inconsistent caused by low amounts of powder, and also can prevent the powder from overflowing.



Simple, flexible, economical



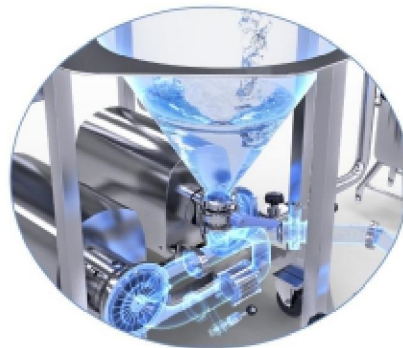
Sensor



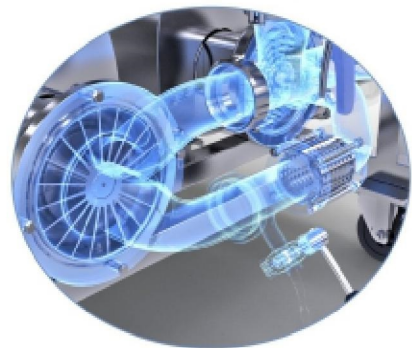
Vibrator and valve



Cleaning liquid is poured into the hopper



Cleaning pipes and hopper

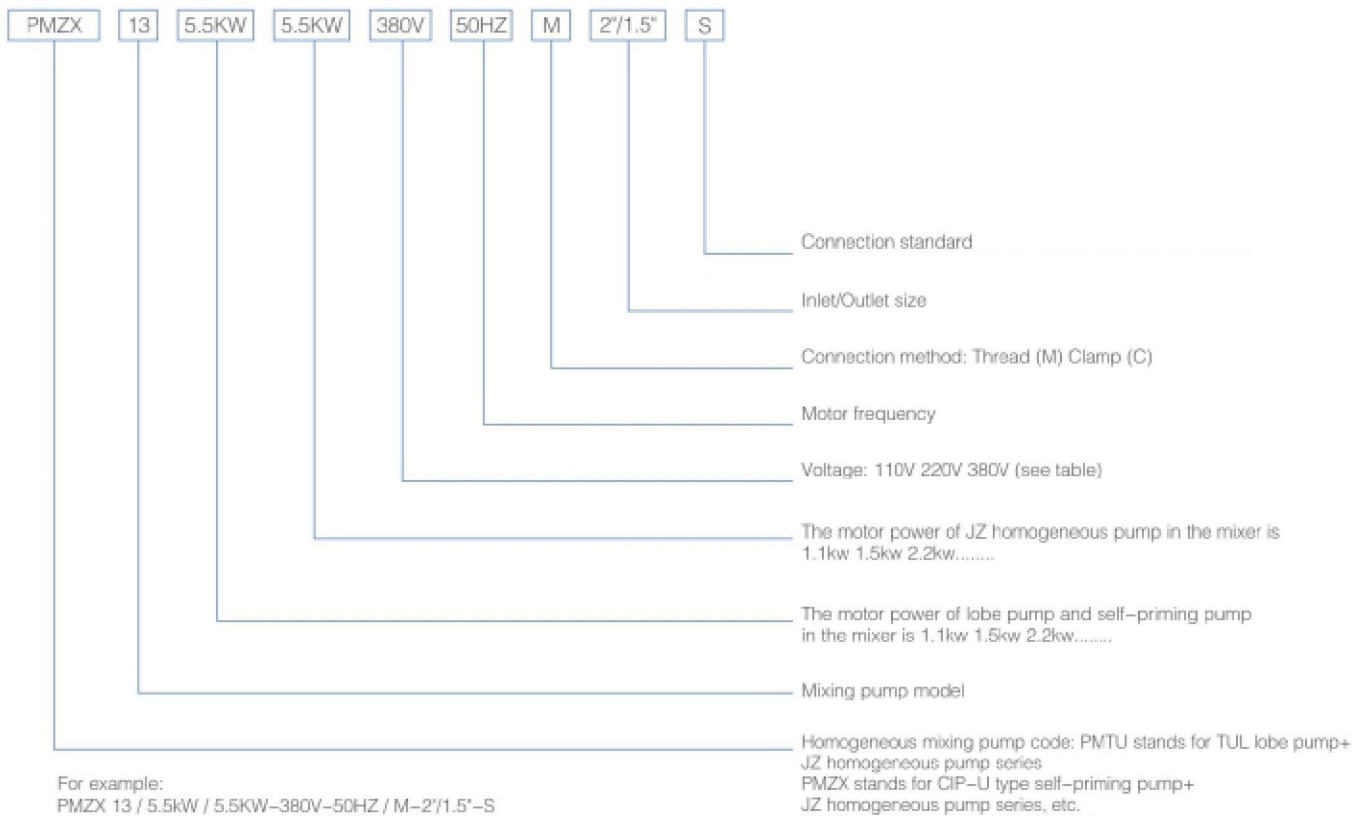


Open bottom discharge valve to drain the cleaning solution

### **Very Simple And Clear Electrical Control Layout**

- Self priming pump, can control speed by frequency inverter to achieve the purpose of controlling the flow.
- Homogeneous pump, can control speed by frequency inverter to achieve the effect of homogenization and mixing, meanwhile control the flow.
- Console, designed with motor overload protection to prevent motor from being burned.
- Console, the shell is designed with work indicator, can distinguish working condition through the light.

# PMZX mixing pump model description



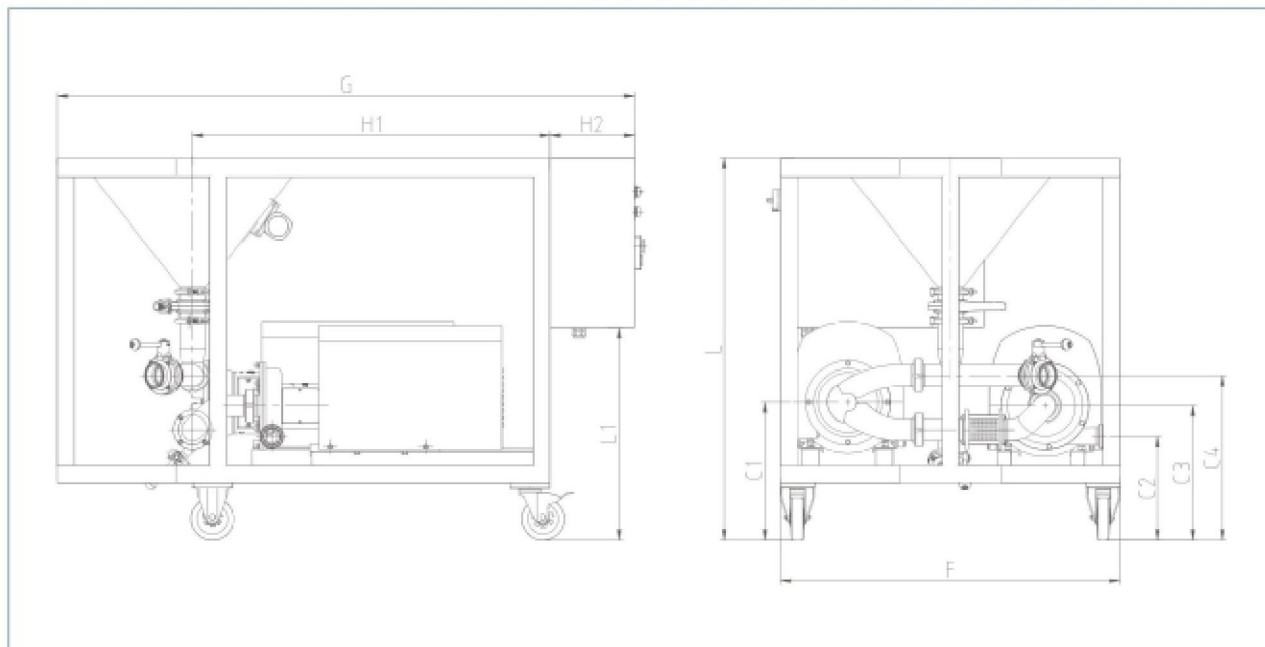
## PMZX Mixing pump selection table



Homogeneous mixing pump	Self-priming pump		Emulsifying homogenizing pump		Powder processing capacity			Inlet	Outlet	Hopper capacity (L)	Weight (kg)
	Rotate speed (1450-MIN)		Rotate speed (2950-MIN)		Sugar class	Skim milk Protein powder class	Thickener powder (for example, pectin sodium caseinate, depends on grade and concentration)				
	Self-priming pump (Model)	Power (KW)	Homogeneous pump (Model)	Power (KW)							
PMZX-13	CIPU-10	5.5	JZ1-10	5.5	500	450	100-200	2"-DN50	1.5"-DN40	45	537
PMZX-15	CIPU-10	5.5	JZ1-15	7.5	1000	900	200-400	2"-DN50	1.5"-DN40	45	560
PMZX-17	CIPU-10	5.5	JZ1-20	11	1800	1600	300-500	2"-2.5"-DN50-65	2"-DN50	45	611
PMZX-19	CIPU-20	7.5	JZ1-30	15	3500	3200	600-1200	DN65-3"-DN80	2"-2.5"-DN50-65	65	640
PMZX-21	CIPU-20	11	JZ1-35	18.5	5000	4500	1200-2000	DN65-3"-DN80	2.5"-DN65	65	732
PMZX-24	CIPU-30	11	JZ1-240	22	10000	9000	1500-3000	4"-DN100	DN65-3"-DN80	65	784



## PMZX Series mixing pump data chart



Model	Assembly Dimension									
	C1	C2	C3	C4	F	G	H1	H2	L	L1
PMZX-13	355	278.5	355	485	1050	1750	1050	300	1011	624
PMZX-15	355	257	355	485	1050	1750	1050	300	1011	624
PMZX-17	355	283.5	384	514	1050	1750	1050	300	1011	624
PMZX-19	355	256.5	384	514	1050	1750	1050	300	1011	624
PMZX-21	355	243	384	514	1050	1750	1050	300	1124	624
PMZX-24	383	243	404	514	1050	1750	1050	300	1124	624

1/105-107 STANLEY RD, INGLEBURN, 2565  
 PHONE: +61 2 9618 1455  
 WEBSITE: WWW.SEPAK.COM.AU  
 EMAIL: SALES@SEPAK.COM.AU