

## PT-C - Powder Liquid Mixer

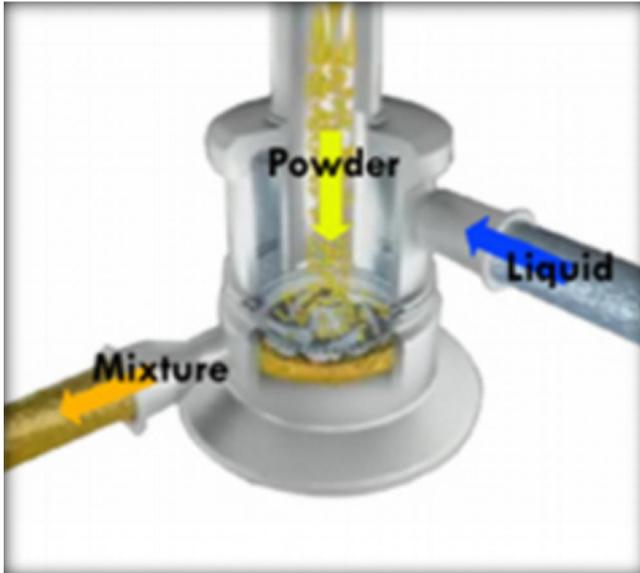
### Introduction:



The PerMix PT-C Series Powder Liquid Mixers are designed for fast and high volume powder mixing into liquid. They are especially distinguished when the powder is "difficult-to-wet" with conventional blending method.

With all its unique features, our PT-C Powder Liquid Mixers are widely used in mixing of all kinds of powder products by a variety of industries, e.g. food and beverage, dairy care, pharmaceutical, chemical.

## How It Works:



Our unique PT-C series Powder Liquid Mixers are integrated by two parts, a casing pipe and a stator rotor high shear mixer. The casing pipe is built vertically and coaxially into the stator rotor system inlet. This double-wall design prevents the powder going through the casing pipe contacting the liquid and forming lumps before they both arrive at the stator rotor system.

As the rotor running at high speed during operation, liquid enters into the chamber and a water ring is created. Vacuum is generated at the center which causes suction of the powder from the hopper above the chamber. A valve at the bottom of the hopper is used to regulate the falling rate of the powder. As soon as the powder gets in contact with the liquid, it is wetted and dispersed into the liquid by the turbulence and later high shear force when the mixture goes through the precise machined clearance between the stator and rotor, and radiated out through the stator openings.

## Other Designs:



Except the double-wall design of PT-C series Powder Liquid Mixer, there are many other ways for powder incorporation into the liquid. The selection among them depends on the processing requirement, material character, budget, etc. With our more than 60 years of know-how, PerMix has the experience to work out the best solution with our customers.

## Applications:

Some typical applications can be:

- Preparation of syrup, sorbitol, glucose, lactose, etc.
- Reconstitution of powdered milk, whey, protein, etc.
- Dissolution of CMC, Xanthan gum, etc
- Preparation of flour and starch slurries
- Preparation of brines
- Pre-mixtures of yogurt and other milk-based desserts
- Suspension of bentonites, TiO<sub>2</sub> in pigment
- Preparation of pesticides and fertilizers

## Options:

A lot of options are available for the PT-C Powder Liquid Mixer:

- Powder hand-held hose assembly
- Variable speed motor; Frequency converter
- Multi-row, multi-stage stator & rotor
- Metal part to be SS 316L or others
- Gasket sealing of FPM, FFPM, etc.
- Pneumatically actuated valve
- Hopper of 50°, 60°, etc.
- Hopper vibrator
- Double mechanical seals

## Specifications:

Model	Watts, kW	RPM, @50Hz	Max. Liquid Capacity, L/hr	Max. Powder Capacity, Kg/min
PT-C/1	1.5-5.5	3,000	5,000	20
PT-C/2	7.5-11		12,000	50
PT-C/3	15-30		35,000	180
PT-C/4	37-75	1,500	90,000	400
PT-C/5	90-132		130,000	600

- 1) Actual liquid and powder capacity will vary depending on the materials and stator rotor type.
- 2) PerMix offers special model according to customer requests.
- 3) PerMix reserves the right to modify the design without notice.

**Gallery:**



[www.permix-mixing.com](http://www.permix-mixing.com)

Standard PT-C Powder Liquid Mixer



[www.permix-mixing.com](http://www.permix-mixing.com)

PT-C Mixer with Electric Control Panel



[www.permix-mixing.com](http://www.permix-mixing.com)

PT-C Mixer with Feeding Table



[www.permix-mixing.com](http://www.permix-mixing.com)

PT-C Powder Liquid Mixer at Work