

## PCH - Shear Pump

### Introduction:



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 PCH Shear Pump has a pair of stator rotor, and the rotor is combined with a pumping impeller in the center and a toothed ring.

By this design, the Shear Pump is able to 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.

By installing an optional hopper or a feeding table, the PCH 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. The Powder Liquid Mixer is built in all stainless steel; with single or double mechanical sealing to be selected according to different materials. The PCH Shear Pump can be easily cleaned with CIP (Clean In Place) system to save time and labor.

## Features & Options:

PCH Shear Pump is ideal for dairy, beverage, food and other hygienic applications, with the following features and options:

- Compact and streamlined design
- All built in stainless steel, with a stainless steel motor shroud
- Easy assembly and disassembly
- Free flow powder induction, high efficiency, free of lumps and fish-eyes
- 90% process time reduction compared with conventional agitator mixing
- CIP available
- Interchangeable stator rotor of various type for different purposes

## Applications:

Some of the typical applications of PCH Shear Pumps are:

### - Food & Beverage

Butter, Canned foods, Cheese, Condiments, Dairy, Dressings, Flavorings, Ice cream, Juices, Ketchup, Salads, Syrup, Yogurt

### - Pharmaceuticals

Cough syrup, Emulsion, Medicine, Ointment, Pharmaceutical, Vaccine, Veterinary drug

### - Cosmetics

Creams, Detergent, Gels, Hair conditioner, Lotions, Shampoo, Tooth paste

## Specifications:

Model	Motor, kW	RPM, @50Hz	Max. Liquid Capacity, L/hr	Max. Powder Capacity, Kg/min	Size [DN]	
					Inlet	Outlet
PCH-100	3-4	3,000	5,000	3	40	32
PCH-130	5.5-7.5		10,000	10	50	40
PCH-160	11-18.5		20,000	18	65	50
PCH-190	22-30		30,000	32	65	50
PCH-210	30-37		40,000	50	80	65

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

**Gallery:**



**PCH Shear Pump with Feeding Table**



**PCH Pump with Feeding Hopper**



**Stator/Rotor of PCH Shear Pump**



**PCH-100 Shear Pump with Water Trap**