

SeFluid's inline high shear pump series are a type of very efficient mixing equipment. It can improve the mixing efficiency by more than 90% than agitator type mixers. At the same time, it has a better mixing effect.

This mixer is a precision combination of rotor and stator. The rotor/stator assembly generates strong shearing force in high-speed rotation. So, it can achieve the purpose of mixing, crushing and emulsifying. This efficient in-pipeline dispersing equipment can continuously process materials and eliminate the quality difference between batches. The basic structure consists of a pump cavity and a pairs of fixed rotors.

How an inline high shear pump works?

SeFluid inline high shear pump series can distribute one or more material phases efficiently, quickly and evenly to another continuous phase. In general, the raw material phases are mutually insoluble.

There is high tangent speed and high-frequency mechanical effect generated by the high-speed rotation of the rotor. The materials in the narrow gap between the stator and the rotor are subject to strong mechanical and hydraulic shear, centrifugal extrusion, liquid friction, and impact.

Therefore, the immiscible solid phase, liquid phase and gas phase can be uniformly and finely dispersed and emulsified instantaneously. Consequently, under the combined action of corresponding mature processes and appropriate amounts of additives, stable products through cycling will be obtained.

Advantages

- Narrow particle size distribution and high uniformity
- Save energy and time, high efficiency
- Low noise and smooth operation
- Eliminate differences quality between batches
- Free of dead corner, 100% dispersed shear
- With self pumping ability
- Simple to use and easy to maintain
- Can be integrated into automated pipeline system
- Large processing capacity, suitable for industrialized online continuous production



Applications

Mixed dissolution:

Soluble solid or liquid and liquid are dissolved together in a molecular or colloidal state; Crystalline powder, salt, sugar, ether sulfate, abrasive, hydrocolloid, CMC thixotropk agent, rubber, nitural and synthetic resin

Dispersed suspension:

Incompatible solids and liquids form smaller particle size mixtures or suspensions; Catalysts, matting agents, pigments, graphite, paints, alumina, compound fertilizers, inks, fillers, herbicides, fungicides

Emulsification:

the liquid Cream; ice cream, animal oil, vegetable oil, protein, silicone oil or light oil, mineral oil, paraffin and wax emulsion, rosin

Homogenization:

Make emulsification and suspension particle size smaller and more evenly distributed; Cream, condiments, juice, jam, seasoning, cheese, fat milk toothpaste, printing ink. enamel

Slurry:

Cell tissue, organic tissue, animal and plant tissue

Chemical reaction:

Nanomaterials. accelerated aeration, accelerated synthesis

Extraction:

Eddy current extraction

Depolymerization:

Nano powder, agglomerated powder

Specification Options

- Material: SUS304, SUS316L
- Standard: DIN, SMS, ISO
- Surface Treatment: Polishing Ra≤0.8μm, Appearance Sandblasting
- Auxiliary Seal: EPDM, VMQ, FKM, PTFE
- Machinery Sealed: C-SIC, SIC-SIC, TC-TC
- Connection Way: Clamp, Thread, Flange
- Temperature Range: -10℃ ~ +140℃

Technical Specifications

Model	Motor Power (kw)	Speed Range (r/min)	Flow Rate (m³/h)	Flow Head (m)
SRS60	1.5	2800	0-1.5	10
SRS100	2.2	2800	0-3	10
SRS120	4	2800	0-4	10
SRS140	5.5	2800	0-5	10
SRS165	7.5	2800	0-8	10
SRS180	11	2800	0-12	10
SRS185	15	2800	0-18	10
SRS200	22	2800	0-25	10
SRS210	30	2800	0-35	10
SRS230	45	2800	0-50	10
SRS245	55	2800	0-75	10
SRS260	75	2800	0-90	10
SRS275	90	2800	0-110	10
SRS280	132	2800	0-130	10