

Twin screw pump is a kind of positive displacement pumps that are widely used in a variety of industries for the transfer of liquids with high viscosity or containing solids. They are particularly useful for pumping viscous fluids, such as crude oil, heavy fuel oils, and asphalt, as well as for applications where product integrity is critical. After years of R&D and improvement, SeFluid's STSP series twin screw pump has continuously improved its efficiency and quality. It has been used in many industrial fields that cannot be replaced by conventional centrifugal pumps, and has been highly praised by users.

### Principle Of Twin Screw Pump

Twin screw pumps work by utilizing a pair of intermeshing screws that rotate within a cylindrical chamber. The screws are designed in such a way that they mesh together and form a series of dynamic sealed surfaces between them. These sealed surfaces create a series of pockets or cavities, which trap the liquid and move it from the inlet towards the outlet of the pump. The close fit between the screws and the chamber walls ensures that there is minimal leakage of the liquid.

One of the significant advantages of twin screw pumps is their ability to handle a wide range of viscosities. The pump's capacity is not affected by changes in the viscosity, making them ideal for handling fluids that range from low to high viscosity. Additionally, the pump's design allows it to handle solids that are suspended in the fluid, such as mud or slurry.

### Principle Of Twin Screw Pump

Twin screw pumps offer several advantages over other types of pumps. Some of the significant advantages include:

#### High Efficiency

Twin screw pumps are highly efficient, with efficiencies typically ranging from 70% to 90%. This is due to their positive displacement design, which ensures that the flow rate remains constant regardless of changes in viscosity.

#### Low Shear

Twin screw pumps generate low shear, making them ideal for handling shear-sensitive fluids such as emulsions, suspensions, and polymers.

#### Low Pulsation

Twin screw pumps generate low pulsation, making them ideal for applications where product integrity is critical. The low pulsation also reduces the risk of damage to the pipeline or other equipment downstream.

#### Self-priming

Twin screw pumps are self-priming, which means that they can create a vacuum that draws the fluid into the pump without the need for external priming.

## Features Of SeFluid's Twin Screw Pumps

### Screw Head

The screw head is specially treated so that it is not easy to bite between the screw head and the pump body, which can improve the service life.

### Mechanical Seal

The material of the mechanical seal is silicon carbide and hard alloy, and different materials can be selected as single mechanical seal and double mechanical seal.

### Bearing

The bearing adopts Japanese NSK, which can improve the service life of the machine.

### Shaft

The shaft is made of alloy material, which is specially treated to improve the resistance to compression and corrosion.

### O-ring

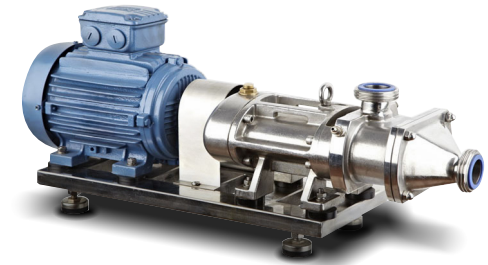
The O-ring is made of high-temperature-resistant materials and can reach more than 200 degrees.

### Gearbox

The gearbox body is made of 304 stainless steel, which meets hygienic standards.

### Helical Gear

The inside and outside of the synchronous helical gear are processed by a grinding machine, and the pump can be rotated forward and reverse, which can reduce noise and make the operation more quiet.



## Applications Of Twin Screw Pump

Twin screw pumps are used in a wide range of industries for various applications including food and beverage, chemical processing, pharmaceuticals, oil and gas.

## Technical Specification

MODEL	SPEC.	FLOW RATE (t/h)	POWER (kw)	INLET/OUTLET (inch)	SPEED (rpm)	DISCHARGE PREEASURE (Mpa)	MATERIAL
STSP03		0-3	1.5	1.5	0-1480	0-0.5	SS304/316L
STSP05		0-5	2.2	2	0-1480	0-1	SS304/316L
STSP10		0-10	4	2.5	0-1480	0-1.5	SS304/316L
STSP15		0-15	5.5	3	0-1480	0-2.5	SS304/316L
STSP20		0-20	7.5	3	0-1480	0-2.5	SS304/316L
STSP40		0-40	15	3.5	0-1480	0-2.5	SS304/316L
STSP80		0-80	22	3.5	0-1480	0-2.5	SS304/316L