

Progressive Cavity Pump



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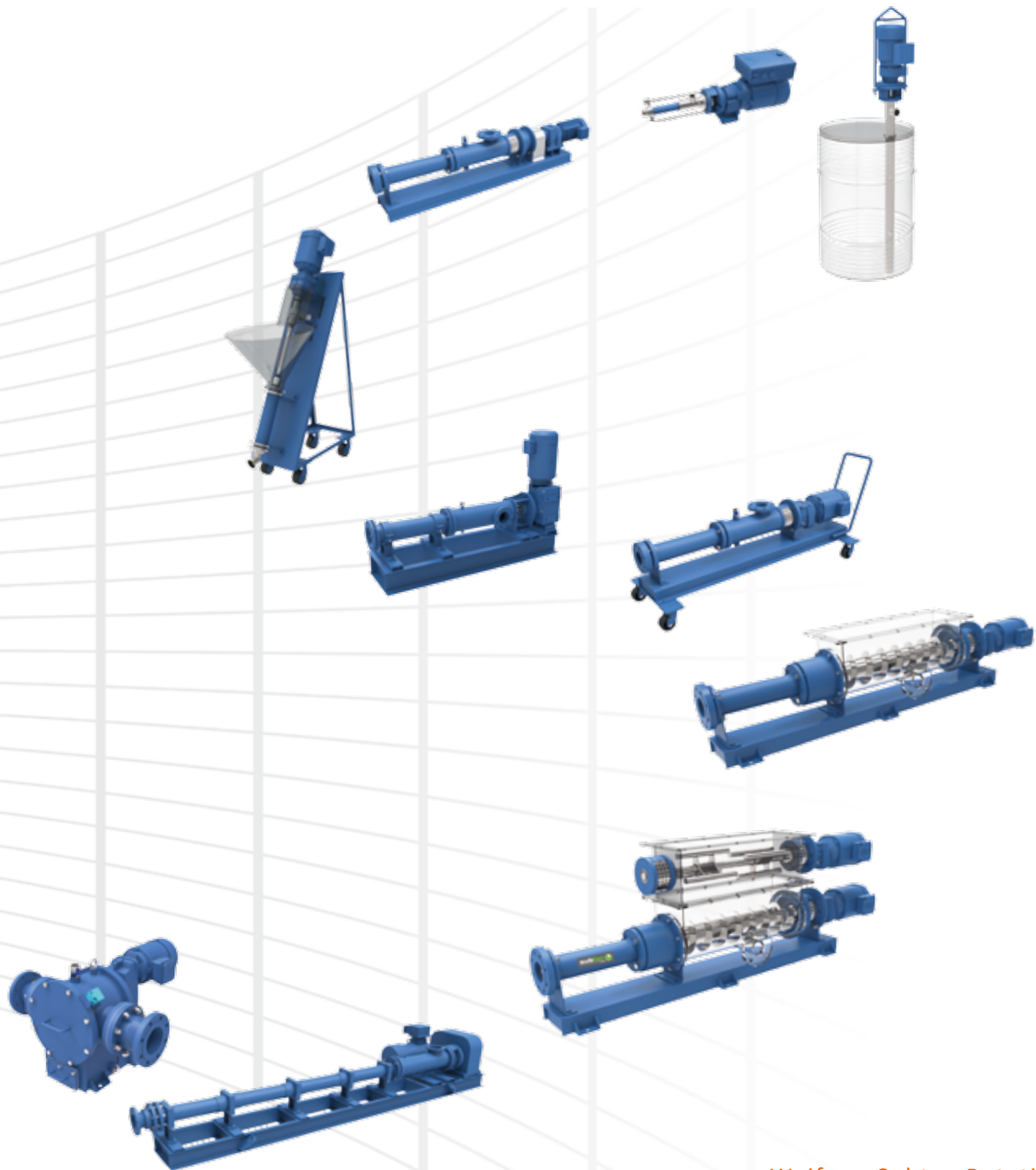


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Progressive Cavity Pump

High Performance German
Down hole and Conveying Technology



Weifang Subtor Rotating
Precision Machinery Co., Ltd.





FACTORY IN CHINA



Bavaria , Germany



PS1000 Multifunctional Helicoidal CNC

Company Profile

Weifang Subtor Rotating Precision Machinery Co., Ltd. is a joint venture between Subtor GmbH in China, as a professional in research, design and production of relative products based on moineau principle.

Subtor with plants and technical centers in both Germany and China, also sales offices and customer service centers in both Central America and Asia Pacific region. In addition, we have working agents and sales representatives at your service in Russia, Kazakhstan, America, Kuwait, India, South America.

Our Key Products: Progressive Cavity Pump, Grinder Macerator, Power Section for Mud Driller, Down Hole PC Pump, Stator Core and the relevant spare parts and services.

Advantage No.1

- The design & technology of production is introduced from Germany
- Core spare parts , stators and rubber parts are imported with original packaging from Germany
- The products tailor made according to customers' requirements
- The special designs can meet different work conditions in various application

Advantage No.2

PS1000 Multifunctional Helicoidal CNC

PS1000 Multifunctional Helicoidal CNC

The rotor, as a core part of the product, its machining precision will directly affect the quality of product.

In order to guarantee the reliability of the product quality, we have imported a professional rotor machining center from Germany. It also has the largest specification and the highest machining precision in similar equipment in Asia at present.

The maximum machining length is 10,000mm

The maximum diameter of work piece is 300mm

Advantage No.3

Quality assurance

- ISO9001 Quality Management System Certification
- ISO14001 Environment Management System Certificate of Conformity
- OHSAS18001 Occupational Health & Safety Management System Certificate of Conformity
- Our well-equipped facilities and excellent quality control throughout all production stages enables us to ensure total customer satisfaction



More Advantages

- Experienced in applications of Moineau principal
- Our own unique rubber formulations
- Worldwide network of sub suppliers and resources
- Research and development of new technology continuously

Our Goals

- Quality Assurance
- Safety Conscious
- Professional Service
- Competitive Rates





Progressive Cavity Pump

Working Principle of PC pump

The conveying process of PC pump depends on the sealed chambers which are formed by the interference fit between the eccentric rotation of rotor and the stationary stator. When the rotor is eccentric rotating within the stator, the internal sealed chambers of PC pump are moved along the axial direction from pump's entry to outlet, thus the fluid in the chambers can be conveyed from the entry to outlet continuously.

Suitable for conveying the fluids ?

- High solid content fluid
(The solid content of sewage can reach 45%)
- Suitable for medium with viscosity up to 1,000,000 cp.
- Fluids containing fibrous materials
- Shear force or centrifugal force sensitivity
- Multiphase mixture of gas, solid and liquid

Characteristics

- High efficiency, low energy consumption
Volume efficiency can reach over 95%
Mechanical efficiency can reach 70-80%
- No pulsation, low noise and continuous operation
- Lower mechanical vibration and operating noise
- Pump flow is directly proportional to rotational speed, which can be used for metering
- Shear-free on conveying fluid
- Insensitive to fluid containing gas & solid particle
- Excellent self-priming capacity, suction height 5-6 meter water column.
- Multiform installation modes
- Simple structure, easy maintenance without special tools

PC pump can transport Various Fluids include water as follows



- Honey, malt sugar, butter, jam, meat, dairy products, lotions, shampoos, starch, locust, broken fruit, chocolate, etc.



- Gas containing liquid, oil-water mixed liquid, oil and gas mixed liquid, De-sulfurization waste-water, dewatering sludge, Flocculent pulp, mortar slurry, etc.



- Coal water slurry, bio-diesel, biogas slurry, biogas residue, crude oil, battery paste, paste slurry, printing ink, pigment, optical fiber, Ointment, etc.



- Emulsion explosive, gelatin, resin, polymer, acid and other chemical agents, additives, adhesives, amino acid liquor, etc.



Environmental Protection

PC pump is commonly used for conveying waste water or dewatering sludge, of which maximum solid content can reach 45%; Metering and transportation of additives (PCM, PAM, lime milk, etc.) in sewage treatment industry;



Biogas Energy

PC pump conveying manure and straw mixture to methane tank, then pumping biogas slurry or residue out of the tank after fermentation;



Petroleum and Petrochemical Industry

PC down hole pump is used in conveying crude oil containing gas, water, sand, CO₂ or H₂S;

The multiphase PC pump can achieve long-distance conveyance of crude oil containing sand, water and gas from oil wells to treatment station;

Transportation of oil displacement polymer in oil field;



Offshore Platforms

PC pump is suitable for offshore oil production platform and oil & gas exploration on oil tanker;



Energy Industry

For conveying highly abrasive Coal Water Slurry continuously;

For transporting shear-sensitive raw materials of emulsion explosives;

The desulfurization wastewater in thermal power plant is highly abrasive, and suitability for conveying by PC pump;

For injecting lead paste into lead-acid batteries;



Mining Industry

For pumping high solid content mineral pulp and ore mortar in mineral processing;

For adding various kind of additives;

For discharging mining-waste water containing high content solid particles;



Paper Industries

High precision metering PC pump can achieve injecting all kinds of additives, such as Flow aiding agent, brightening agent, dispersing agent, and be used for delivering adhesive, coating curing starch and PVA, etc.

Food, Medicine and Cosmetics Industry

Hygienic PC pump is applied to transport all kinds of raw materials of making medicine;

In other sanitary production line, Hygienic PC pumps are prevailing Especially in pumping syrup, broken apple, tomato, lees, starch, shampoo, lotion, puree liquor, etc.

Use for Dosing Processing

In modern unmanned assembly workshops, high precision small scale PC pump can be matched with robot arm in the process of coating adhesive; achieving the purpose of precision metering.





Design & Features



Rotor

Rotors can be designed and machined into different Geometrical shapes in accordance with customer requirements. Various Hardening processes such as surface hardening, vacuum furnace heating, and surface spray welding are possible, after treatment, rotor's hardness can reach up to HRC65-70°

Stator

Rubber compounds of Stators are imported from Germany, Subtor owns a variety of rubber formulations, such as NBR, NBRH, HNBR, EPDM and FKM, which can meet different working conditions, for abrasion resistance, corrosion resistance, high temperature resistance; Food grade rubber also available.

Transmission part

Subtor produce various types of universal joint for choice, in addition to traditional pin and pin bush type, as well as sanitary, flexible, ball gear and cross pin type, in order to cope with different torque and axial load transmission requirements.

Shaft sealing

According to different working conditions, Subtor provide packing and mechanical seal for selection. At the same time, in order to extend service life, professional cooling and flushing system for the shaft sealing are optional.

High quality driving system

SEW, NORD, ABB and other high quality driving brand can be selected and matched with our pump.



Stator with Rotor

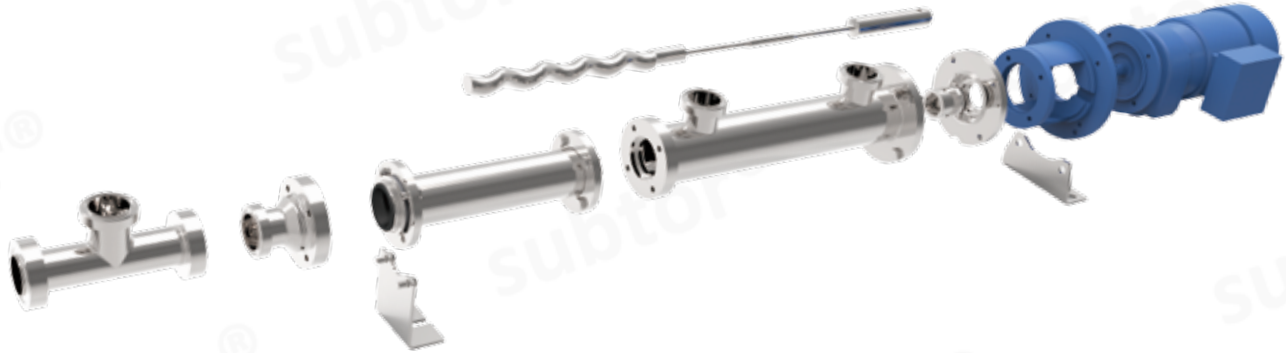


Flexible Coupling Rod



Open universal joint





Design Characteristics

- **No thro—bolt (short pull bolt designing)**

As Subtor's innovative design, we are using no thro-bolt design (or short pull bolt) to affix stator, discharge flange, and pump housing without using long thro-bolt, which transformed traditional stator's fixed and connection structural.

- **Simplified design for easy maintenance**

While, due to there is no thro-bolt shielded, the installation and maintenance of thermal or coolant jacket will be more convenient.

- **Double joint seal sleeves**

Compared with the traditional design of single sealing sleeve, single layer of rubber material easily be damaged by continuous operation friction generated at rotating joint, hence the joint seal would aged and failed overtime. With double rubber sleeves, we can prevent contamination of product with lubricating oil and prolong life of inner joint seal.

- **Spherical teeth joint(Subtor S joint)**

Subtor S joint, researched and developed by Subtor independently, can transmit larger torque while bearing heavier axial force. Besides, Subtor S joint is designed as a whole unity, which reduces the number of components and can be easily installed, maintained and replaced.

- **Cross universal joint**

For large size and multi-stage PC pump, our heavy duty cross universal joint, which adopts “grease and oil” lubrication , and can withstand large torque and axial force, also its operation is more safe and reliable.



External & inner Joint seal



Subtor S joint



Cross universal joint





Configuration Options

- **Water injection nozzle**

Operation of PC Pump must avoid “Dry Running” which can lead burnout of stator and rotor which can occurred over a very short runtime. Subtor thoughtfully designed water injection nozzle on the pump housing, which is used to injected liquid into pump housing before starting for lubrication and prevent run-dry. Besides, the injection nozzle also plays a function as exhaust valve. Free it before pump starting, can help fluid flow into pump housing completely.

- **Protection cover**

Subtor designed protection-cover mounted on the drive stool to prevent danger from approaching rotational shaft, and can prevent dust, fibers, or foreign matters from entry drive parts. Meanwhile, it is easy for observation, disassembly & maintenance.

- **Observation window on pump housing— Optional**

The universal joint of the PC pump is easy-wear part, which is located inside of the pump and cannot easily be disassembled and serviced. Observation windows can be added onto the side of pump housing based on customer's need. During maintenance inspection, worker only need to remove the cover for observation, inside of the pump housing, which avoided tedious disassembling procedures.

Various suction & discharge connection- Optional

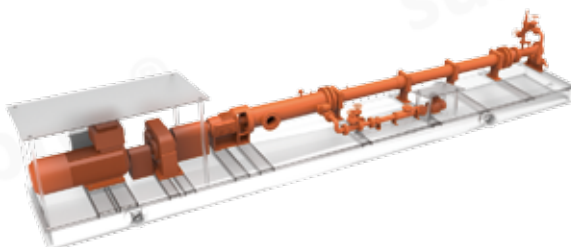
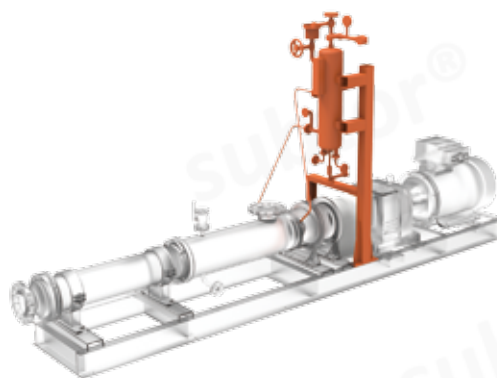
The standard connection type for suction and discharge end is flange mounted, but according to customer's, it can be changed into various types, like thread connection, clamp connection & sanitary quick-change connector. Besides, the flange orientation direction also can be upward, rightward or leftward.

- **Mechanical Seal Piping Plans(Details refer to Page 11)**

In order to avoid failure and prolong service life of shaft sealing, Subtor can design and match different flushing & cooling system to support and protect shaft seal, which can create more favorable working condition for mechanical seal.

- **Skid Mounted System**

In order to adapt to some special restrictions of working conditions, Subtor can offer overall design for skid installation of accessory equipment & instruments, such as lubrication pump, gate valve, safety valve, check valve, tank, filter, various detection instruments and automatic control device, to help field operating and Integral Installation.



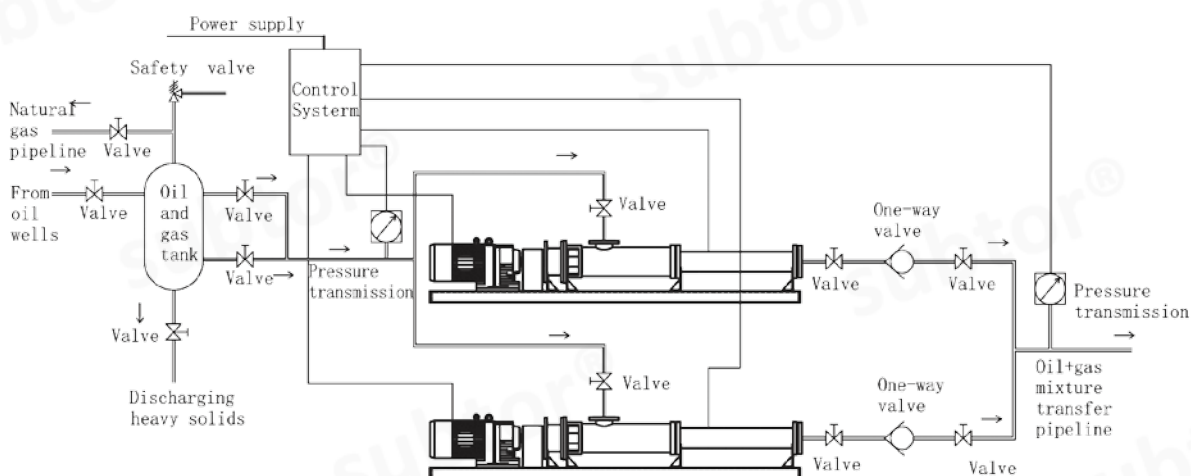
Automatic Control System

Inlet Constant Pressure Control

A pressure sensor is installed in inlet of the PC pump; when inlet pressure exceeds the set value, pump will increase the rotating speed automatically for reducing the pressure of pump inlet. Conversely, it will reduce rpm to increase pressure of pump housing, so as to achieve automatic constant pressure control of pump inlet.

Outlet Constant Pressure Control

Outlet of the PC pump is also equipped with a pressure sensor. When outlet pressure exceeds the set value, pump will be slow down or stopped automatically, to achieve automatic control and protection of pump outlet.



Supporting accessories

• Dry running protector

The temperature sensor is installed in stator to determinate the temperature of stator rubber, when the actual temperature exceeds set value, alert user or pump will be stopped automatically, so as to achieve protection of the pump.

• One-way valve

Somet imes , a backpres sure f rom discharge end of PC pump will cause rotor's running in opposite directions, then drive the motor rotate reversely and generate hidden danger. But Oneway valve can cut off high-pressure fluid from pump's outlet pipeline, thus to realize protection of pumping system.



• Pressure sensor

The pressure sensor can continuously monitor inlet and outlet pressure of pump and transmit signal back to control system.

• Safety valve (relief valve)

Relief valve is generally mounted at high pressure discharge of pump, it will open up automatically when pressure of pump outlet rises and exceeds setting, thus fluid will be released to lower pressure through a pipeback bypass.

• Basket filter

Installed before the inlet to filter the mud block and sand in the crude oil and protect the pump from block.





Selection of Rotor & Stator

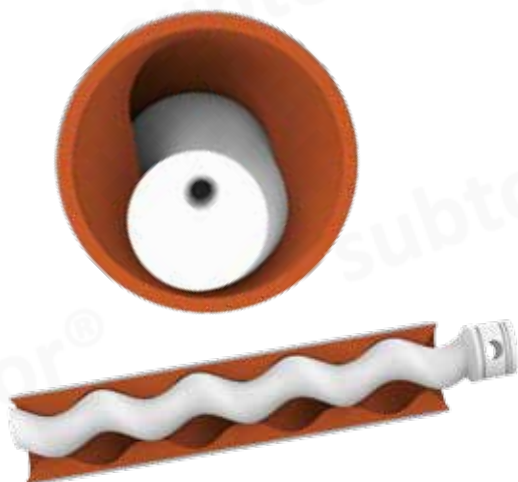
Geometry Introduction

Type A

Short pitch/Single Lobe

Rotor/Stator Thread: 1/2

Standard Design, Stable Operation

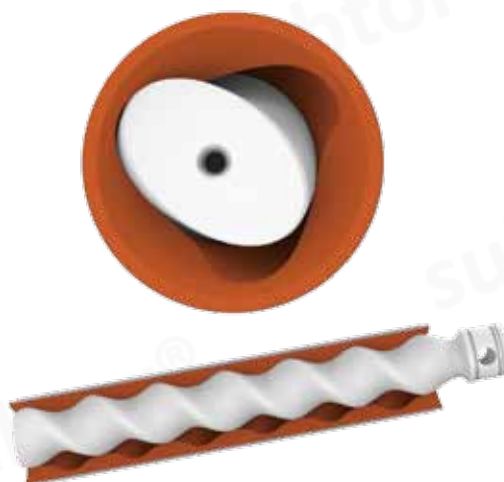


Type D

Short pitch / Double lobes

Rotor / stator thread: 2/3

Suitable for abrasive fluid

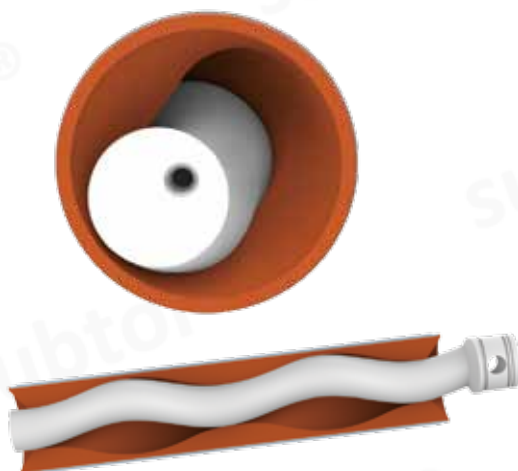


Type B

Long pitch / single lobe

Rotor / Stator thread: 1/2

Suitable for low pressure & big flow rate

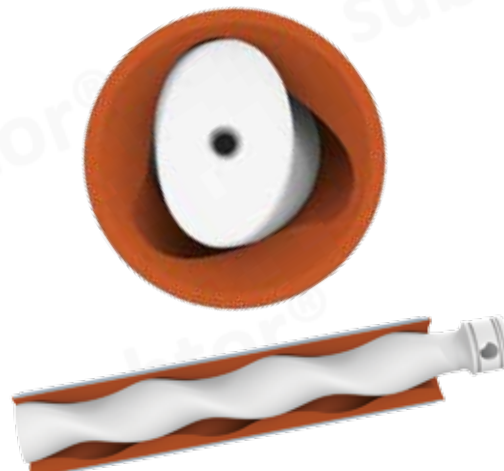


Type P

Long pitch / double lobes

Rotor / stator thread: 2/3

Suitable for low pressure, big capacity condition



Common compatible elastomers (stator & pump seal)

Material	Corrosion resistance	Swelling resistance	Abrasion resistance	High temperature resistance	Temperature range	Suitable Application
NBR	general	good	general	general	+110°C	Petroleum, sewage, food and beverage, chemical, or paper making industry
NBRH	good	excellent	good	general	+120°C	Oil refining, chemical, waste water
EPDM	good	poor	good	general	+120°C	Chemical industry, chemical reagent, paper making
FKM	excellent	excellent	poor	excellent	+180°C	High temperature and corrosive fluid
HNBR	excellent	good	good	excellent	+170°C	Petroleum, petrochemical and chemical industry
PTFE	excellent	excellent	poor	excellent	+230°C	Acid & alkali and other strong corrosive medium, high temperature and high hygiene requirements of the food and beverage industry
NBRF	good	good	good	good	+110°C	Food, beverage and pharmaceutical industries
EPDMF	excellent	good	good	good	+110°C	Food, beverage and pharmaceutical industries

Common wetted metal parts (Casing/Rotating parts/Rotor)

Metal material	Corrosion resistance	Abrasion resistance	Chlorine resistant Cl ⁻ concentration unit ppm	Applicative fluid
Carbon steel	general	general	poor	For abrasive but noncorrosive fluid, cannot be used for food
Carbon steel (harden treatment)	general	excellent	poor	For non-corrosive but highly abrasive fluid
SS420 (harden treatment)	general	good	poor	For slightly corrosive and abrasive fluid
SS304	good	general	< 100	Can be used in food industry and for non-corrosive acidic fluid
SS304 (harden treatment)	good	good	< 100	For corrosive and abrasive fluid, cannot be used for food
SS316	good	general	100~2000	Can be used in food industry and for non-abrasive acid fluid
SS316 (harden treatment)	excellent	excellent	100~2000	For corrosive and abrasive fluid, cannot be used for food
Duplex SS	excellent	excellent	1000~40000	or corrosive fluid with high content of Cl ion but non-abrasive acid fluid
Duplex SS (harden treatment)	excellent	excellent	1000~40000	For corrosive fluid with high content of Cl ion and abrasive acid fluid
Tool steel (harden treatment)	general	excellent	poor	For heavy abrasive medium, like sludge cake
Alloy steel (spray welding wd)	good	supper	good	For heavy abrasive medium, like waste-coal Mixture Mine slurry Sludge cake

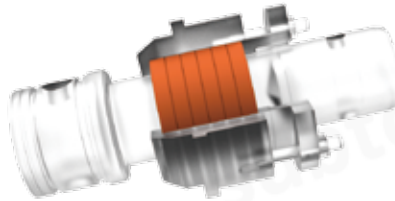


Type selection of shaft seal

Packing Seal

Advantage

- Various materials, reliable sealing
- Low cost, easily replaced
- Simple to operate and install



Kevlar Packing

Disadvantage

- High friction between packing and shaft will decrease mechanical efficiency, and the drive shaft will scuff easily.
- Packing seals with self-lubricating properties, will result in a small amount of leakage. Hence this seal cannot be used in the working condition which limits leaking.



Hardening of drive shaft

Application

- Fluid: low temperature, less-corrosive, or lower shaft speed;
- Working conditions (without strict limit on fluid leakage):

Sewage sludge or dewatered sludge in environmental protection;

Oily wastewater in Oilfields;

Nontoxic or pollution-free crude material and wastes



MG1

Subtor Solution

- Surface Hardening treatment of connecting shaft: Increasing wear resistance and extending service life
- Packing seal with water flushing: Cooling, lubrication and ensuring sealing effect

Mechanical seal

Advantage

- Excellent sealing effect, no visible leakage
- Longer lifetime, small sensitivity of vibration
- Less friction, lower mechanical efficiency losses
- Wide application



M7N

Disadvantage

- Complex structure requests high level of installation skill
- Difficult for replacement
- Long procurement period and more pricey



HJ977

Application

With proper selection of type, material and flushing / cooling system (Piping Plan), Mechanical seal can be used in any working condition and fluid, especially for low or high temperature, vacuum, high pressure, different rotating speed, corrosive, abrasive, flammable, explosive, toxic, or application with leakage limitation.

Solution—Mechanical Seal Piping Plans

API has established standardized piping plans for seals that provides industry guidelines for various seal arrangements, fluids and control equipment.

- Clean
- Cool face lubrication
- Effective heat removal
- Leakage controlling
- Consideration of personnel and environmental safety

Commonly used mechanical seal piping plans & their features

Plan31

Principle: Plan 31 uses an abrasive separator to remove frictional heat & solids from the flush stream keeping the seal clean.

Application: Mechanical seal can be lubricated and cooled by pumping fluid which doesn't contain solid impurity.

Plan53 (A/B)

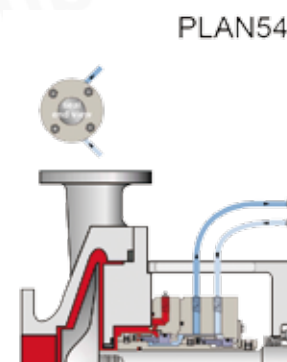
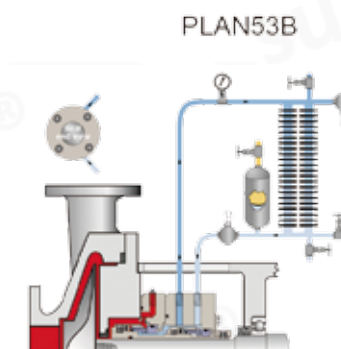
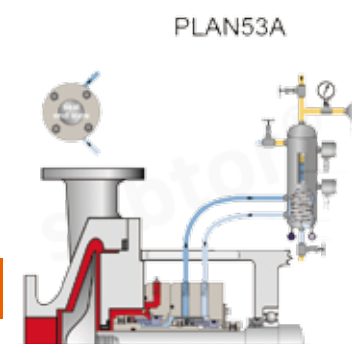
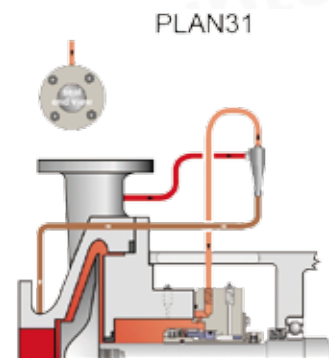
Principle: Plan53A/B uses an external reservoir to provide barrier fluid for a pressurized dual seal arrangement. Reservoir pressure is provided by a gas, usually nitrogen. Wear particles settle to bottom of reservoir and do not get recirculated. Heat is dissipated by reservoir cooling coil.

Application: high saturated vapor pressure liquid, light hydrocarbon liquid, dangerous or toxic liquids, not clean and abrasive liquid

Plan54

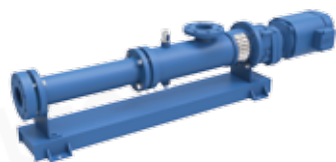
Principle: Plan 54 utilizes an external source to provide a clean pressurized barrier fluid to a dual pressurized seal. It can provide pressurized flow to multiple seal installations to reduce costs. Positively eliminates fugitive emissions to atmosphere.

Application: Similar with Plan 53.



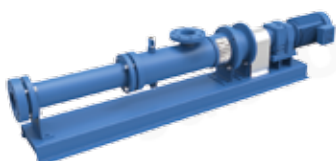


Product Series



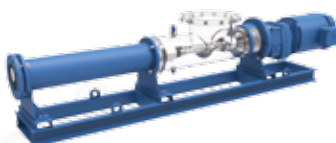
S Class

Commonly use design with flange meant for direct coupled without the need of coupling hence reducing the over installation length and initial investment.



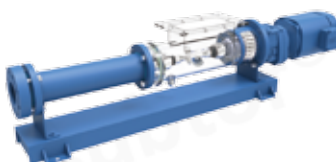
A Class

Equipped with independent bearing housing construction to withstand higher axial load and pressure.



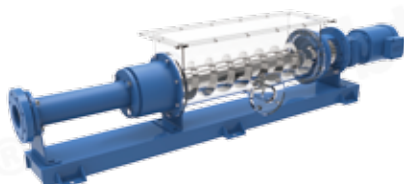
M0 Class

Small round hopper and feeding screw can promote sticky fluid into the pump housing.



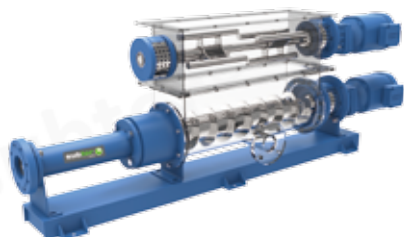
M1 Class

On M0 basis, M1 Class is designed with rectangular inlet hopper and suitable for conveying moderately viscous fluid whose solid content can up to 18%.



M2 Class

Rectangular inlet hopper and coupling rod with propulsion unit by feeding screw, effectively feeding fluid into the conveying elements, prevent from accumulating at the entrance. This design is used for conveying high viscosity, high solids content up to 30% , and poor liquidity fluid.



M3 Class

On the basis of M2 pump, a standard bridge breaker is added on M3, which can help the high viscous medium entering in the casing and prevent bridging phenomenon from happening. The solid content of fluid can up to 45%.

M5 Class

The hopper and compression cavity are prolonged to promote the conveyance medium of poor liquidity and dehydrated easily, like potato dregs, starch, beet pulp, vinasse, soybean protein residue and apple mash.



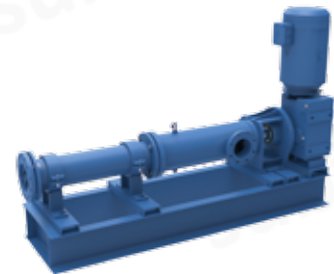
Mx Class

Specially designed for biogas field, the pump equipped strengthened rectangular inlet hopper and helical blades is used to mix and convey the straw, animal waste, biogas slurry and the viscous high solid content kitchen waste.



K Class

As a special design, it's size is reduced to two thirds of the standard product, and especially suitable for installing into narrow space. It can be widely used in shipbuilding industry and ocean platform and so on.



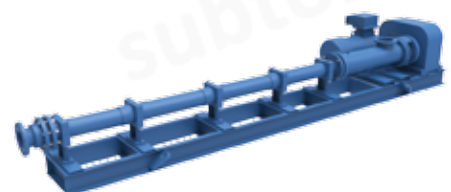
BP Class

The feature of BP pump are "backpack" design with V-belt pulley drive, which can reduce direct impact of axial load to gear motor. Smooth in operation, low noise and small vibration.



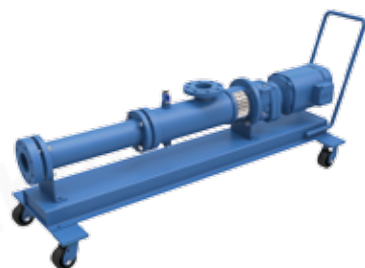
V Class

V class is suitable for long distance transferring. The maximum pressure of V class bearing can reach to 72bar. Its capacity can reach to 300m³/h.



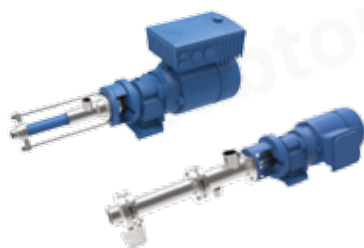


Product Series & Customization



T Class -- Mobile

By mounting Subtor standard pump on a trolley with wheels and handle for loading and unloading flexibility.



MM Class—Metering

Miniature sized and compact structure, especially designed for accuracy. New MM class is modularization design with wide range of size, standard drive configuration with Nord Gear.



OU Class

Vertically mounted, the design is used in sump pits and tanks containing high content of solids and heavy medium. Pump body length varies with immersion depth. Pump duty commonly control by level switches. Alternative for installation with space limitations.



BE Class

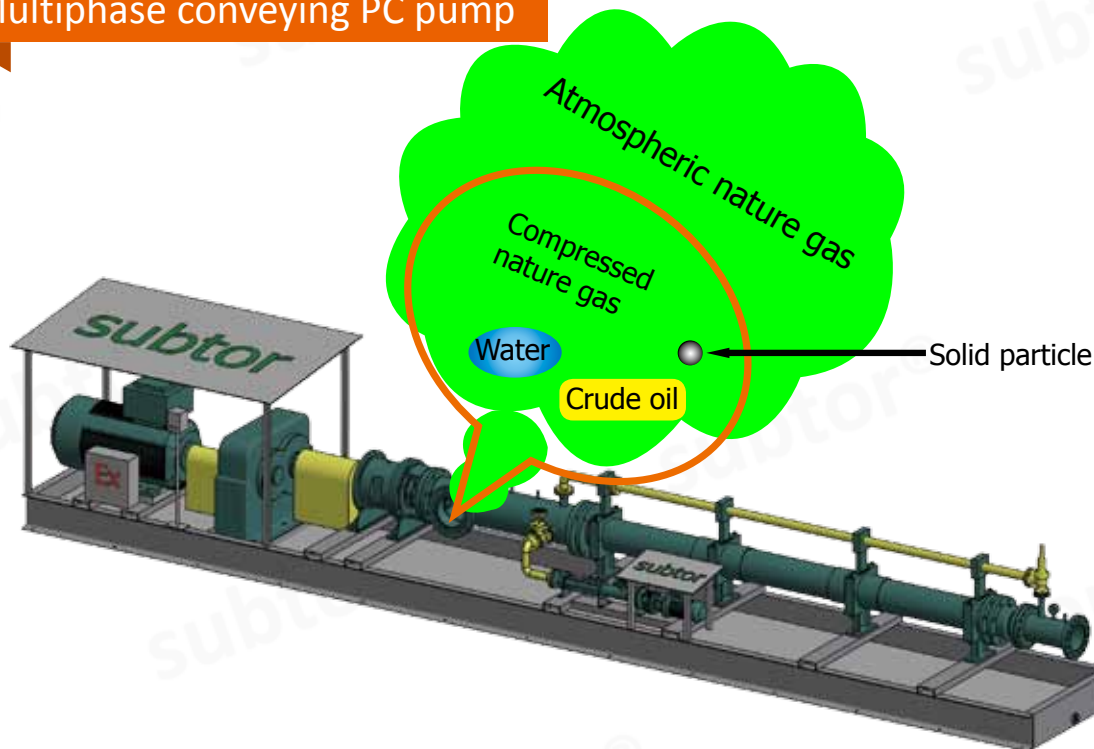
BE class is based on conveying characteristics of OU pump . With special design, it is suitable for dipping into different containers for extraction or drum emptying. Modular design, wide size range.



SM & VM Class

Open type hopper and mobile design, tailored for filling or quantitative supply of viscous fluids in different working conditions.

Multiphase conveying PC pump



- Using same pipeline for oil and gas mixing conveying without extra gas pipe-line and separating equipment, reduced investment.
- By adopting auto-control system of constant inlet pressure of pump, a stable oil output is maintained.
- Reduce wellhead back pressure, so as to reduce internal leakage to up-stream oil wells.
- To increase pressure of whole oil pipe-line system of pump outlet, improve volumetric efficiency.
- For high gas content situation, a lubricating pump is used to lubricate multiphase pump in order to prolong the service life of the main pump and system.

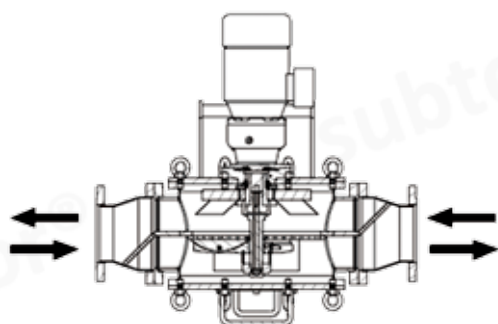


Subtor Multiphase Pump on site





Complimentary products



VDM Macerator

VDM Macerator is mounted at the suction of the pump, used for cutting blocky soft material and fibrous material in the medium. Concurrently, trapping heavy solids, preventing the pump from blockage or damage.

The new generation VDM:

- Modular design
- Reversible direction
- Equipped with reducer union
- Interchangeability of main parts
- Standard drive configuration; Nord Gear

VDM Macerator Selection Table

<i>type</i>	<i>power</i>	<i>solid %</i>	<i>speed rpm</i>	<i>flow rate M3/h</i>	<i>flange of inlet /outlet</i>
VDM080	1.5-2.2 KW	0-8%	280-350	20-60	DN80/PN16
VDM100	2.2 KW	0-8%	280-350	30-100	DN100/PN16
VDM125	2.2-3 KW	0-8%	280-350	50-150	DN125/PN16
VDM150	2.2-3 KW	0-8%	280-350	80-200	DN150/PN16
VDM200	3 KW	0-8%	280-350	100-250	DN200/PN16
VDM250	3-4 KW	0-8%	280-350	150-300	DN250/PN16
VDM300	4 KW	0-8%	280-350	150-350	DN300/PN16



Stator core manufactured field on PS1000 CNC

Stator Core

Subtor can design and provide stator cores for special applications like asymmetric-, tapered- and multilayer-stators which are particular designed to balance the individual shrinking of compounds



Rigid stator (Metal & PTFE)

Traditional rubber stator suffers commonly from swelling, thermal expansion, aging effect.

In some special conditions such as conveying hot oil, asphalt, high temperature heavy oil, strong acid, strong alkali and high concentration of chloride ion, which are not suitable for rubber stator. Our solid stator (PTFE and metal stator) will be able to solve these problems.



Features of PTFE and metal stator:

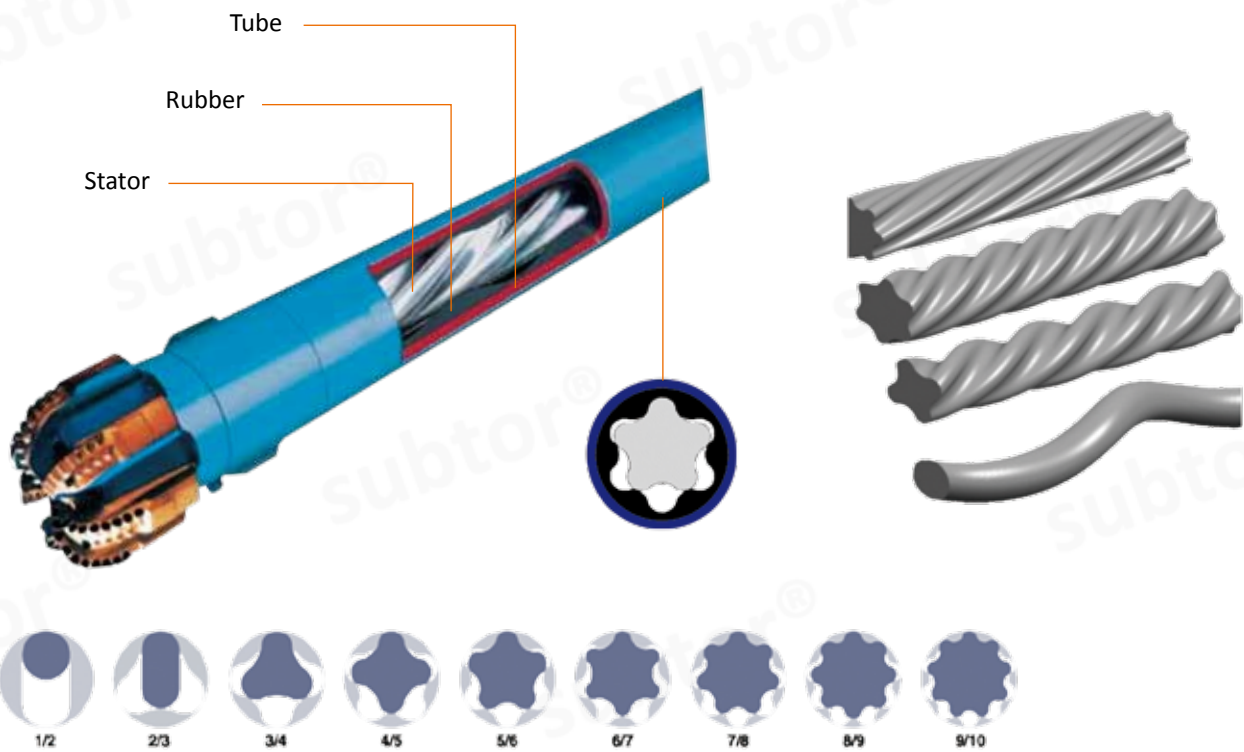
- Especially suitable for the high working temperature condition (Up to 300 °C).
- Can withstand higher pressure (Max. up to 12 bar), and with lower torque.
- For the same size and specifications, the pump body of rigid stator is smaller than traditional rubber stator.
- For the metal stator, heat is dispersed faster, and there is no temperature fatigue and aging problems, service life is therefore much longer.
- PTFE stator is more suitable for strong acid, strong alkali and chlorine ion of fluids.





Core Products

Power Section

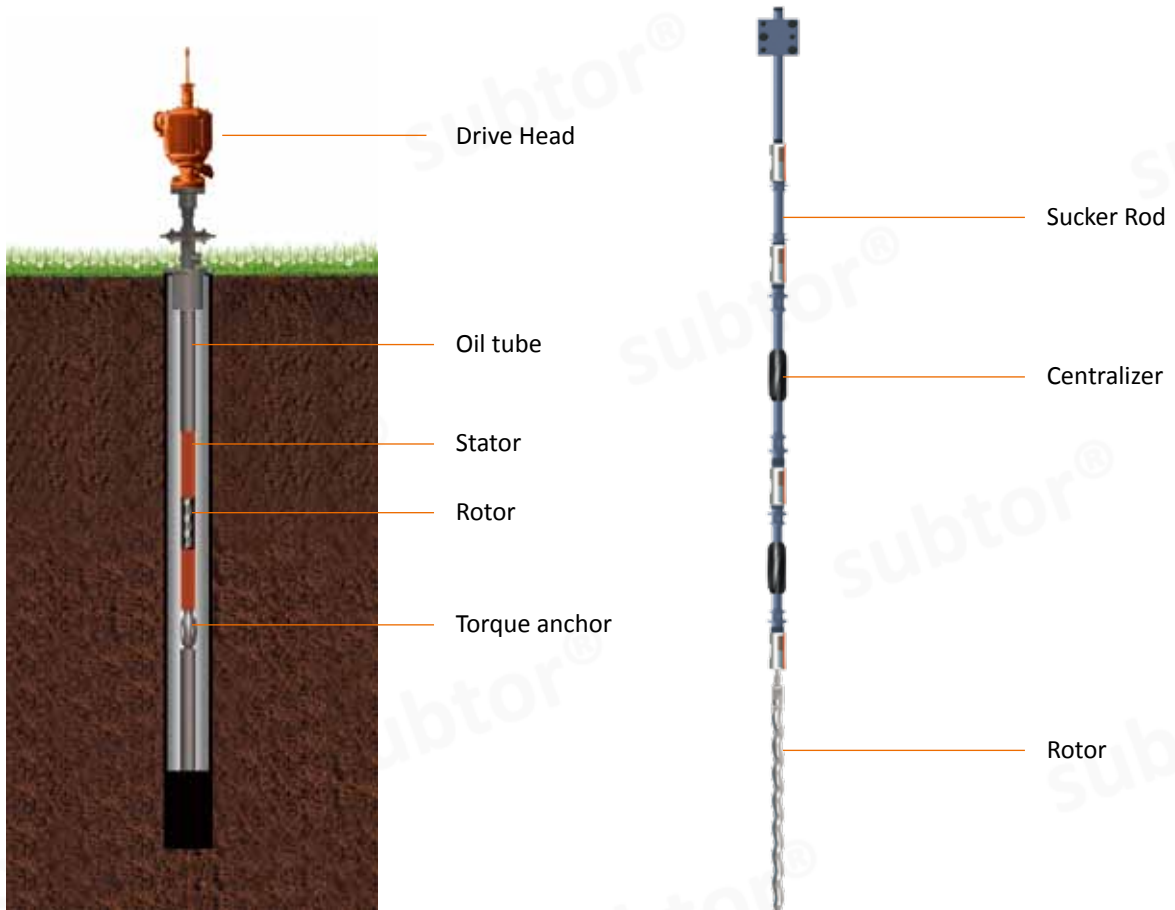


The production of customized rotors, stators and radial bearings for Mud – Motor Power sections and special applications with our team of experts in Germany and Asia.

Subtor develops, design and produces high end Power Sections for various applications or to the precise needs of customer.

Detailed Know How and full process control from the very first layout until the final run in the field is our strength.

PCP Down-hole Pump



- Conveying crude oil with high viscosity
- Conveying crude oil with high solid content
- Low-cost, high efficiency, less consumption
- Convenient installation and operation
- Low noise

The depth of installation can reach down to 2000m

The fluid production can reach to 350m³/ day

We can match direct driven well heads, torque anchor, sucker rod centralizer or other optional equipment

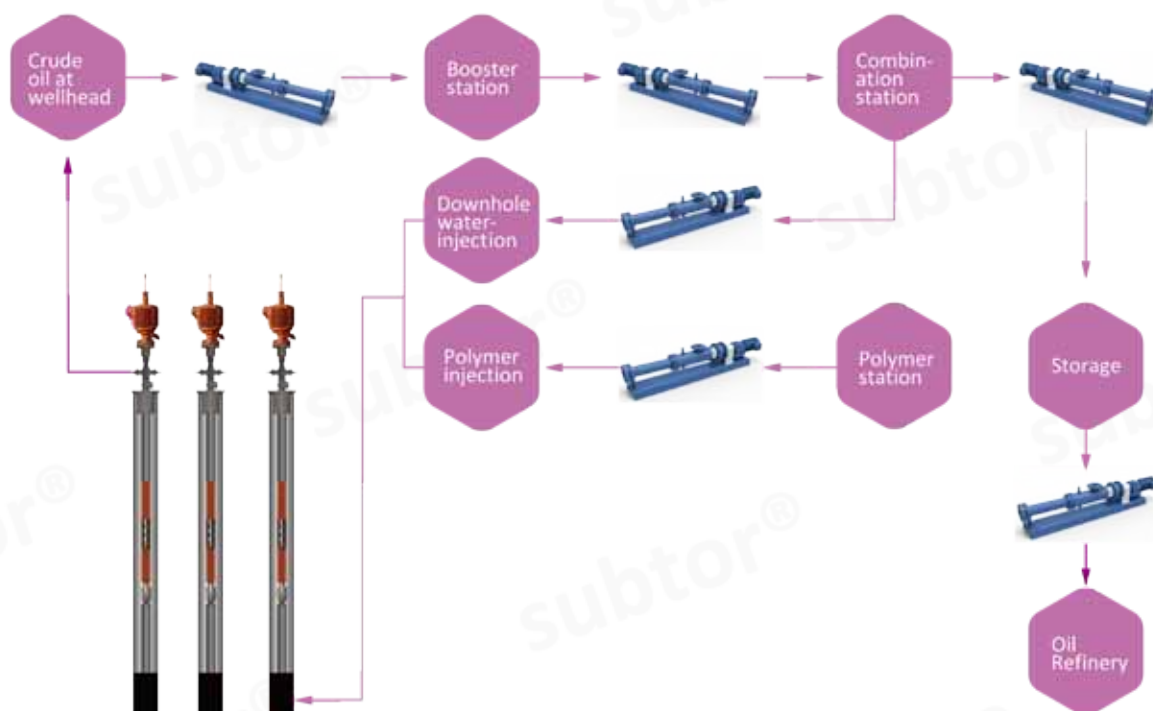




Application Flowchart

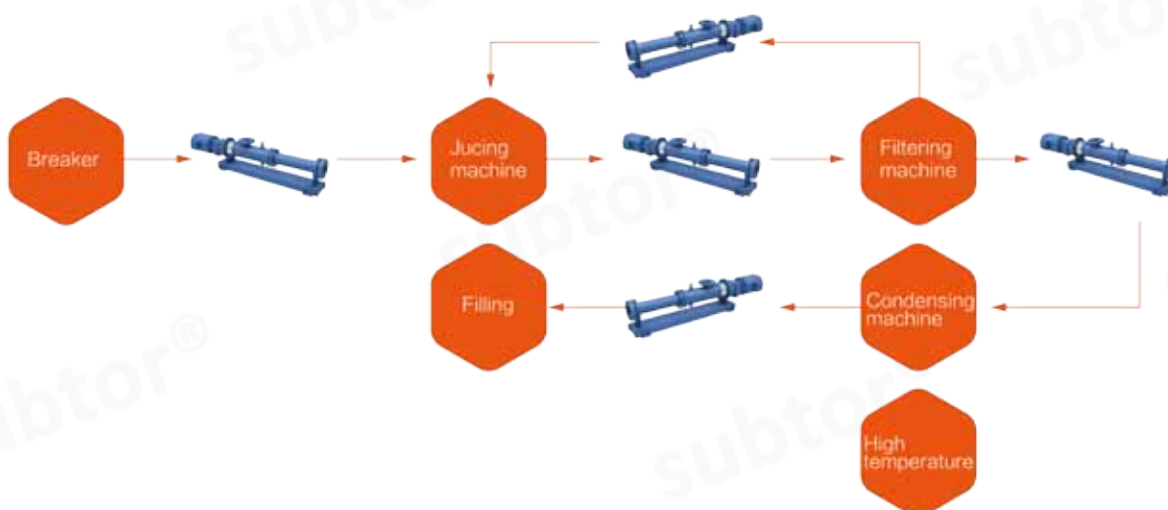
Oil Industry

PC pump are widely used to convey crude oil, oily sewage, waste oil, polymer and multiphase of gas and oil.



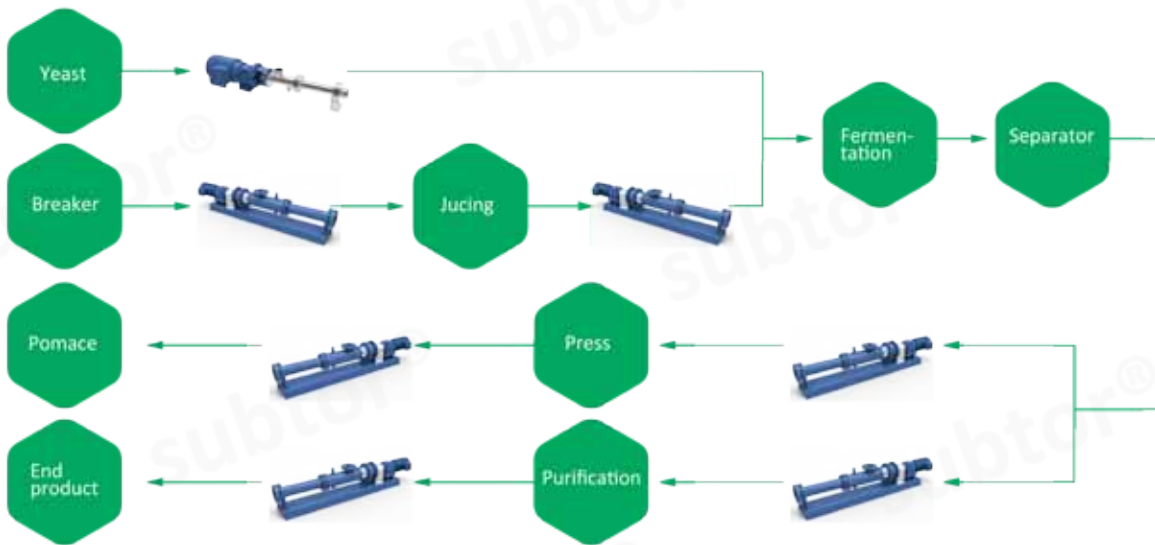
Apple Juice Industry

PC pump are widely used to convey apple mash, juice, fruit dregs, concentrated sauce and so on.



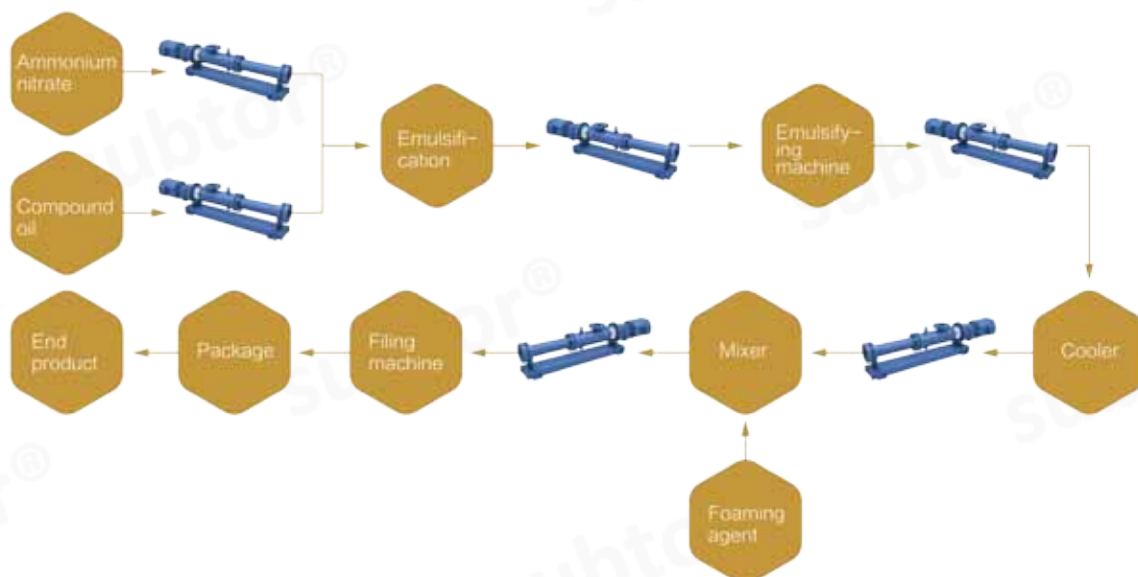
Wine Industry

PC pump are widely used to convey grape mash, grape juice, yeast and various sauce.



Emulsion Explosive Industry

PC pump are widely used to convey fluid base ammonium nitrate solution, oil phase paraffin, the matrix after emulsification and sensitizer.

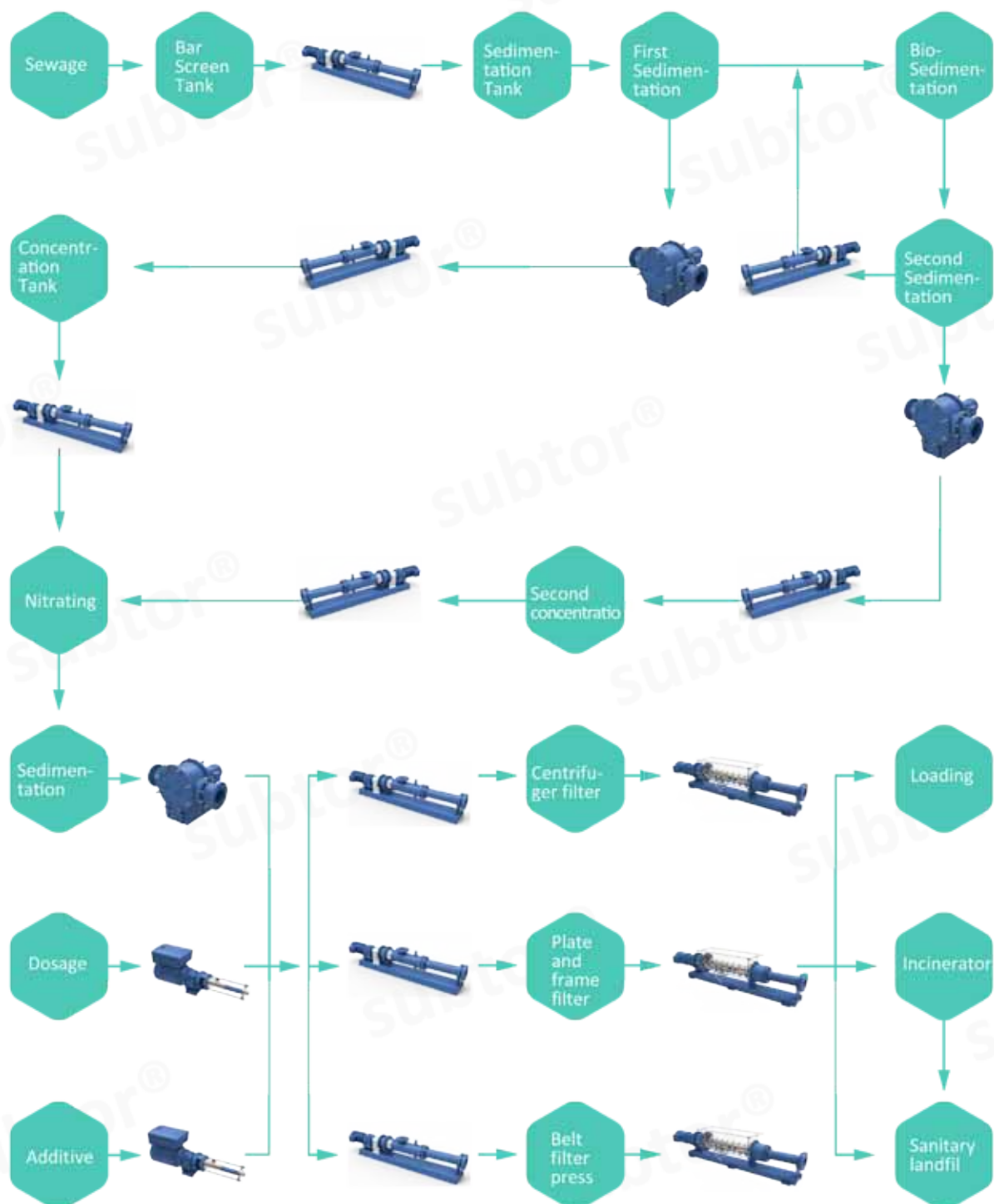




Application Flowchart

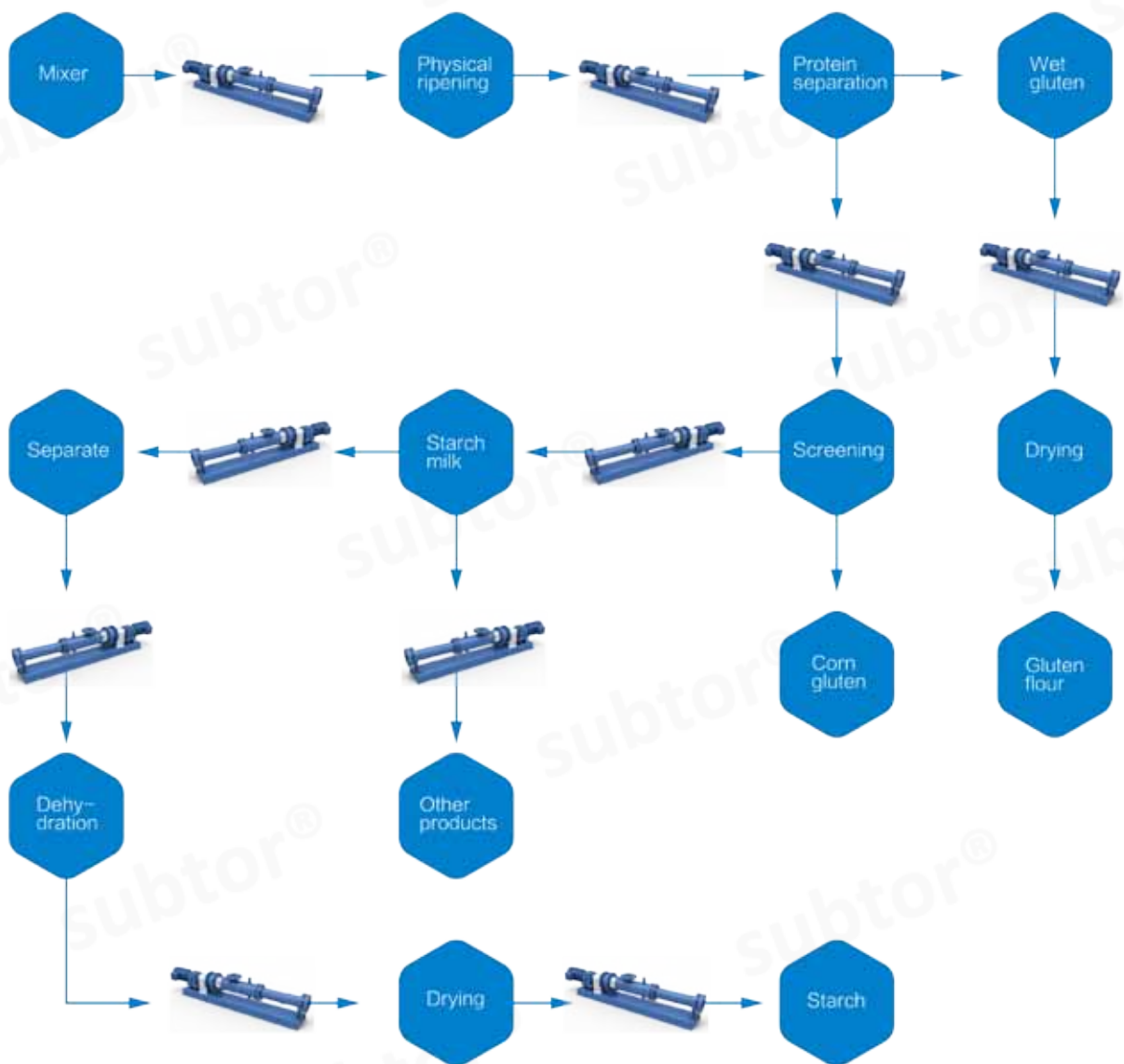
Sewage Treatment Industry

PC pump are widely used to convey sewage of different concentrations, sludge, slurry cake after filtered and various medicals.



Starch's Industry

PC pump are widely used to convey the broken potato, various sauce, starch liquid, dough, gluten and other viscous substance.





Reference & Services



S Class/ CRUDE OIL



VM Class/CHEMICAL INDUSTYR



A Class/MULTIPHASE



MM Class/ CHEMICAL AGENT



A Class/CHEMICAL MATERIAL



S Class/ CRUDE OIL



MM Class/ FLOCCULAN



S class/POLYMER

Spare parts

Wear parts are commonly kept in stock; we aimed to deliver the spare parts to the client soonest when they need them

- Rotor
- Stator
- Joint sealing, O-ring
- Joint and other parts, such as pin, spacer sleeve, long/short sleeve, clamp spring
- Shaft seal (mechanical seal or packing)



After - sale service

Our professional after service engineers are ready to provide solutions for you day or night

Services include:

- Training operating personnel
- Technical consultation to our clients to solve the problems
- Maintenance contract for our equipment

We aimed to deliver our solutions within 2 hours upon receiving the fault notifications. And a service engineer to be mobilized on site within 24 hours.

