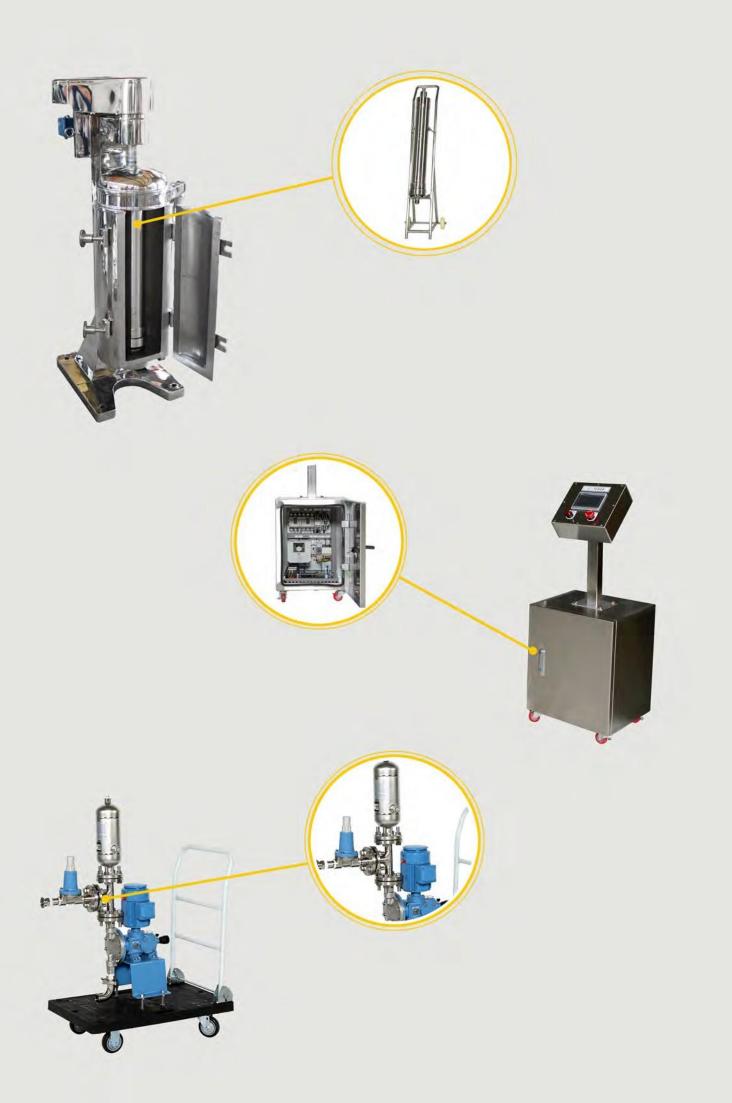
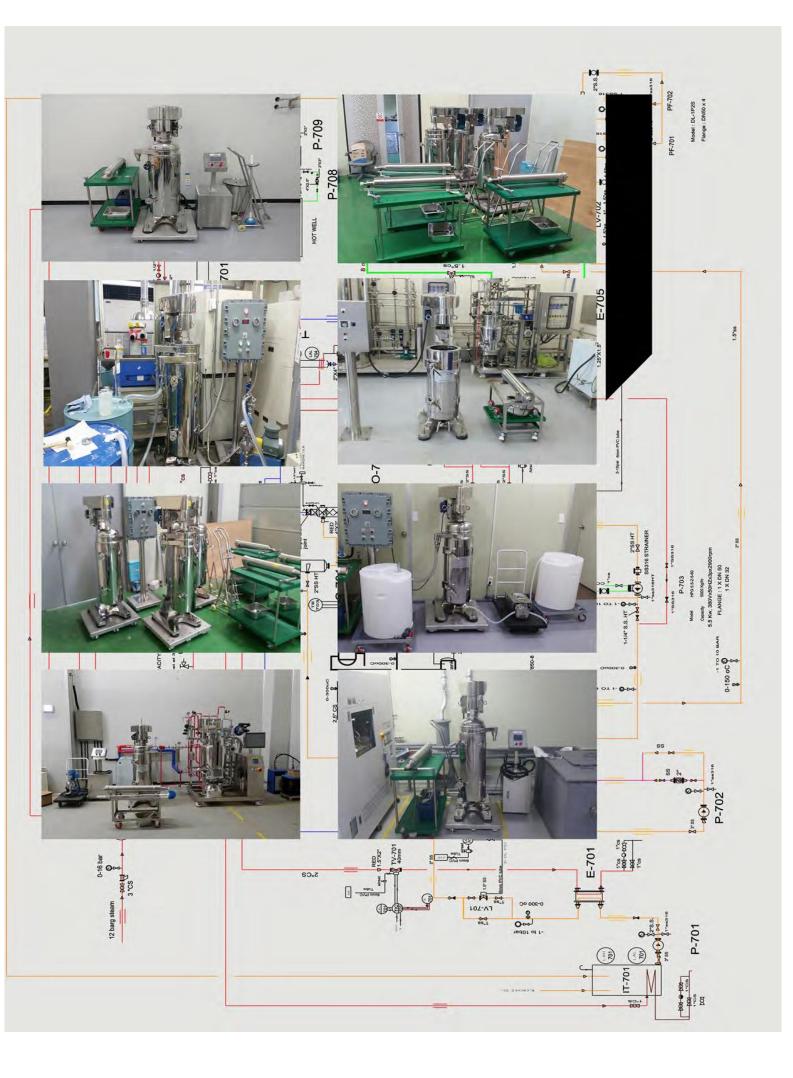
Tubular separator

Shenzhou Machinery Enterprise Introduction

Shenzhou Machinery is a modern innovative high-tech centrifuge R&D and manufacture enterprise with two branches in China,Sri Lanka. Adhering to the concept of quality is the enterprise life, innovation is the driving force for the development, Conform to the trend of the development of modern industry, Fusion concept of global economic integration, Creative thinking, Integrate liquid Separation processing industry leading enterprise in the upstream and downstream resources; Gather technical force; Together with the power of the global enterprise for business purposes; Dedicated to supply the clients complete separation solution.

Our company assemble a number of skillful, talented professionals, introduction advanced of international centrifuge technology with 30 years experiences of the development and design, through adopting international advanced management method, we have developed very professional separator and centrifuge for edible oil, pharmaceutical, chemical, waste project and various liquid industry. Until now we have accumulated more than 500 clients in global world market and get wide good feedback for our products and service, as our enterprise name "Shenzhou Machinery" described we would like to supply the products like the Shenzhou quality and service.





Shenzhou Machinery HIGH SPEED CENTRIFUGES

For Laboratory and Industrial Production



(B)

Base on 30 years for tubular separator design and market experience, Shenzhou Machinery designed and manufacture the China made tubular separator, earn a reputation and good feedback from global customers.

The Shenzhou Machinery's GF & GQ Series Tubular Separators are engaged to separate low percentages (<2%) of suspended solids which are between 1 and 0.1 microns in size. Tubular Separator operates at high speeds to generate up to 13400~19000 gravities of centrifugal force (separation factor), As the fluid travels up through the bowl, centrifugal force cause suspended solids to migrate to the bowl wall they retained where are and manually collected. The clarified fluid is discharged through the top center of the tube.

Tubular separator is suitable for the separation of two non-miscible liquids of different densities. An excellent replacement for many traditional filter and membrane applications due to their high efficiency and small footprint.



GF SERIES SEPARATION TYPE

The Shenzhou Machinery GF series of tubular separator can be configured as a three phase solutions (Liquid-Liquid-Solid) or liquid-liquid solutions. If any solids are present, they will collect on the wall of the centrifuge tube while the two separated liquids are discharged at the top of the tube by the dedicated outlets.

GQ SERIES CLARIFICATION TYPE

The Shenzhou Machinery GQ series as a clarifying type (Liquid-Solid) of tubular separator is designed to separate low percentages of solids which are suspended in a liquid. The high centrifugal force generated causes the solids to migrate to the wall of the centrifuge tube where they are retained. The clarified liquid is the discharged at the top of the tube.





GQ/GF LABORATORY TYPE

GF/GQ-45 Tubular Separator is mainly used for the Laboratory or small scale industry application, by the adjustable high rotating speed from 8000-30000 rpm, it can almost used for every liquid separation for testing. It can achieve two functions with only one separator by exchanging the bowl.



Shenzhou-Machinery Tubular Separator Provide different models to fit various customer requirements:

OPEN TYPE

This model allow the operator disassemble and assemble the bowl conveniently, basis on the special Front door design. safety Inspection of the locker and connect with door, ensure the sealing of machine.

SWING TYPE

Considering of female workers, the swing type can easily pull out the bowl and fit it on the bowl wheel holder. Contrasting with the Open type it need to manually swing the machine body into the horizontal level.





NORMAL TYPE

This normal type tubular separator is fit for the normal operator with out easily disassembling requirements.

Working Procedure

Shenzhou centrifuge are characterized by their ability to process different capacity of tubular bowl. Fluid mixtures are fed into the bottom of the rapidly rotating separation chamber (also known as bowl). Solid are retained inside the bowl, while liquid components are expelled from the top of chamber through a collection tray.

For liquid-liquid separation, two collection trays are used. The retained solids cake is dry and densely packed by the high G-force of the Reyes Machinery Centrifuge. Plastic bowl liner are available for models GQ/GF to facilitate cell paste and solid remove. The optimum size centrifuge for given application depends on the volume and properties of the process liquid. Typical process volume specified for each centrifuge are approximate. Contact NBS for a no-obligation consultation.

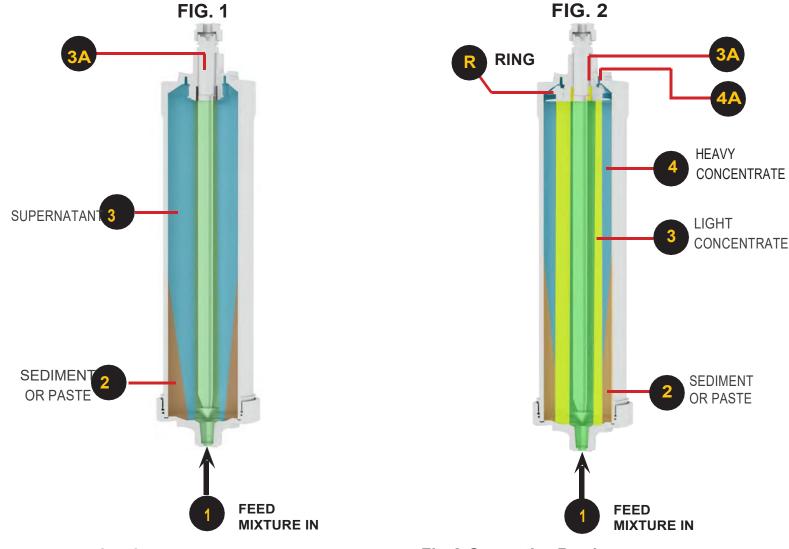


Fig. 1. Clarifying Bowl

The feed mixture enters at the bottom of the bowl (1). Biomass or other sediment collects on the wall of the bowl, forming a cake or paste (2). Clear supernatant (3) exits from the top of the bowl (3A).

Fig. 2. Separating Bowl

The feed mixture enters the bottom of the bowl (1) and sediment collects on the walls of the bowl (2). Liquids separate rapidly by specific gravity, and separating ring (R) directs liquids into light and heavy streams (3) and (4) which exit bowl in separate trays at (3A) and (4A).

Typical Application

Features & Benefits

- Harvesting Biomass

 Harvesting Biomass
- Clarify Process Liquid
- Separating liquid Products Animal
 - Blood Processing
 - Bio remediation
- Processing of Granular, Crystalline & ullet
 - Fibrous Suspensions
 - Separation offilterable &

 Non-filterable sludge



- Rapid separations
- Consistent Performance
- Range of models facilitate scale-up
- Simple to set up, use and clean for
- minimal down-time
- No replacement membranes Small
- footprint save space Enclosed
- model available for ambient gas control
- For mixtures with very high solid concentration, drum centrifuge can be supplied
- Powerful 3-phase electric motor or customize by various power
- Permanently-lubricated Oversized head bearings maintain long service life

Model	Bowl Speed (rpm)	G-Force	Bowl Capacity Nominal (L)	Running Load (kw)	Dimensions (mm)		
					Width	Front-to-Back	Height
45	10000-30000	19800	0.4	0.4	500	420	760
75	19000	15700	2.2	1.5	760	450	1120
105	16300	15620	6.0	2.2	840	500	1600
125	15000	15750	8.0	3.0	900	550	1600
150	14000	15700	10.0	3.0	1020	600	1600

Specifications

Customization Option

1. Special Material Selection

In consideration of special liquid as high or low Ph value. The product contact surfaces can be constructed of either 304 Stainless Steel; 316 Stainless Steel; or Duplex steel all with highly polished surfaces.

2. Ex-Design

In order to material of flammable and combustible , give security design for the Extype includes sealing parts and Ex-motor.

3. Cooling or Heating Jacket

Tubular separator capable to assemb the cooling or heating jacket, used for some biological material need temperature control.

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