



**CROWN**  
MACHINERY



## Crown Machinery Enterprise Introduction

Crown Machinery Inc. is a modern innovative high-tech centrifuge R&D and manufacture enterprise with four main branches in global work located in USA , South Korea, Philippine and China. 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 "Crown Machinery" described we would like to supply the products like the crown quality and service.

Nowadays, our USA branch mainly forwards the waste-water market; Manila branch mainly prompts the coconut products machinery in Asia-Pacific market; Our Korean branch also named the Hanil Science Medical Co.,Ltd. is focusing on the Bio-tech and Bio-pharmaceutical market; And Liaoyang Crown Machinery Co.,Ltd. in China works as the head-quarter of four branches to serve the machinery selection, sale, technology support and after-service job.

Up to now, we have successfully introduced many clients' final products such as coconut oil into Chinese market to achieve a mutually beneficial win-win situation. We do hope serving the client not only the products but also the wonderful experience to cooperate with us.



**Welcome to contact and visit us.**



## Centrifuge for Dairy Industry

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The dairy and beverage market continues to expand, people desire to the high quality dairy products, therefore the centrifuges and separators play an important role of the production process.

Crown Machinery's dairy series disc centrifuges is the specially designed of inlet/ outlet system that created a sealed and softy separation condition to ensure the active ingredient of the material not be destroyed and made the nutritional value and keep freshness as well as original flavor well.

Due to the high rotation speed, our disc centrifuge enable to entirely isolate the extreme fine particles dispersed in suspensions.





## Solution Provider for Dairy Process

- Milk and whey cream skimming
- Clarification of milk and whey
- Bacteria removal from milk and whey
- Cream Separation

### Advantages of Disc Stack Centrifuge:

- Easy maintenance and fair prices for service and maintenance thanks to compact machine design
- Individual and flexible adaptation to customer processes for optimal yields
- Full automatic discharge or manual discharge system can be chose.
- Customized solutions which can easily be integrated into existing processes and systems
- Optimum process layout: selection or combination of different separation equipment: decanters, disc stack centrifuges, belt presses and systems



**Milk Clarification Type  
DGC-700**



**DGS-400  
Milk Skimming Type**



**DGS-300  
Milk Skimming Type**



**Milk Clarification Type  
DGC-500**

## Centrifuge Machine Standard Design

The machine has a main frame that consist a horizontal drive shaft with clutch and brake, worm gear, lubricating oil bath and vertical bowl spindle in the lower position.

The bowl is mounted on top of the spindle, fixed by the upper parts, the gasket, the collecting parts, and frame hood. The material feed into the bowl, by the effects of centrifugal force the liquid phase pumped out of machine through outlet pipe, meanwhile the solid phase adhere on the bowl wall, then were discharged automatically by operation water. The electric motor is of the variable frequency drive type or of controlled-torque type. All parts in contact with material are made of stainless steel.

### Basic Equipment

Concentrator or purifier parts, inlet and outlet devices, revolution counter, set of erosion-protective parts, illuminated sight glass for liquid phase outlet, vibration sensor, vibration-isolating base plate, flange motor, set of tools and set of standard spare parts.

### Optional Extras

Electric cabinet, frequency converter, discharge control panel, standard set of fittings, set of CIP valves and fittings and serviceability package for on-line viewing of separator status



### Material Data

Bowl body, hood and locking ring S.S304 Solids cover and frame hood S.S304 Frame bottom parts green casting iron Inlet and outlet parts S.S304 Gasket and O-ring Nitrile rubber

## Disc Centrifuge Main Parameter

Model	Bowl Speed (rpm)	Through-put Capacity (L/H)	Running Load (kw)	Dimensions (mm)		
				Width	Front-to-Back	Height
300	7302	300-500	4	950	950	1250
400	7070	1000-2000	7.5	1555	1130	1640
480	6600	3000	15	1780	1500	1900
500	6600	5000	18.5	1780	1500	1900
550	6000	10000	22	1800	1850	1900

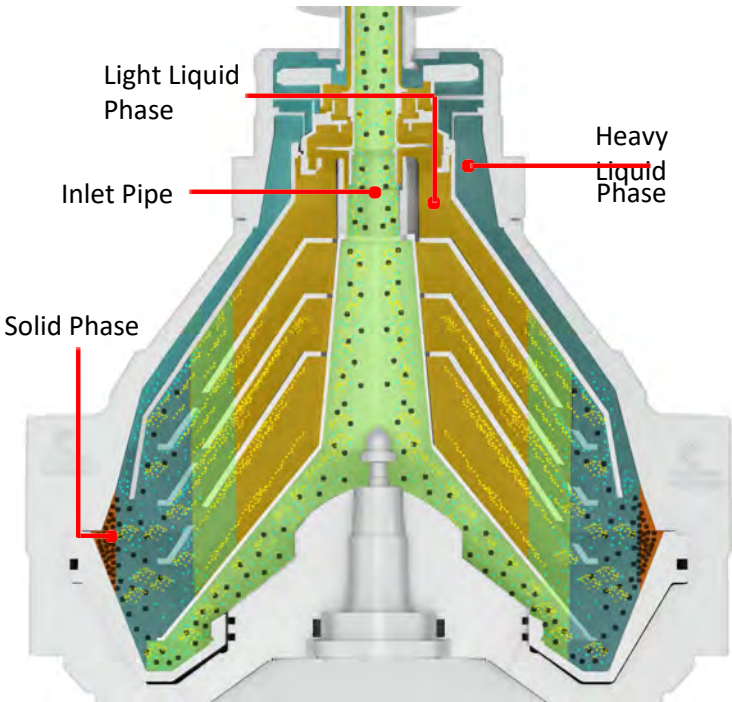
\*Actual production capacity base on the raw materials.



## Skimming

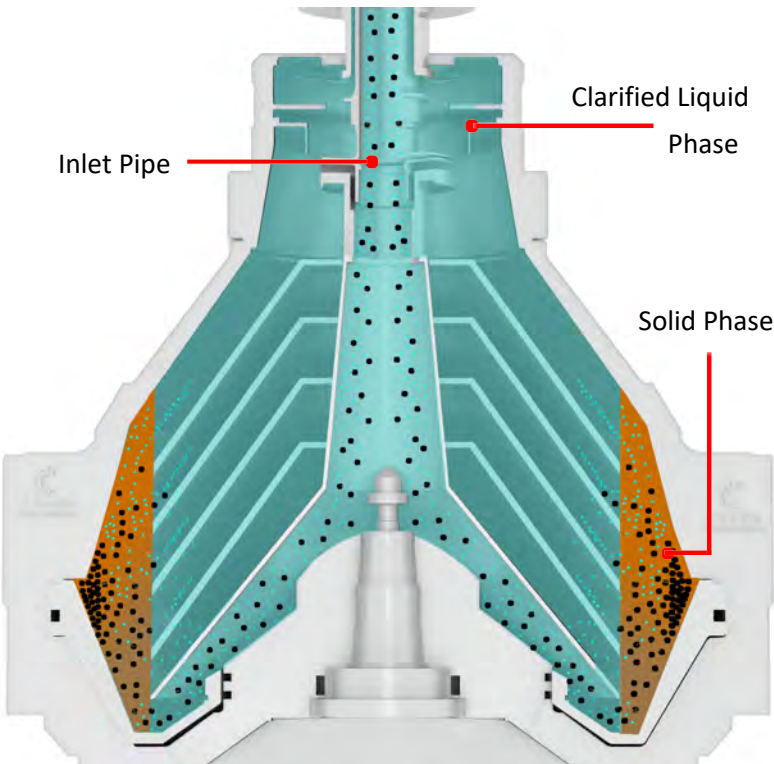
Remove the fat from the milk with a disc centrifuge (DCM series, three phase separation) to form cream and skim milk

In the centrifugal separator, the disc is fixed on the dispenser of the top cover and the center of the body. The milk enters the vertically spaced distribution hole from the hollow shaft at a distance from the edge of the disc, and the milk is in the separation channel formed between the discs , By centrifugal force, the particles in the milk or fat, according to their relative to the continuous medium (skim milk) density in the separation channel was separated,



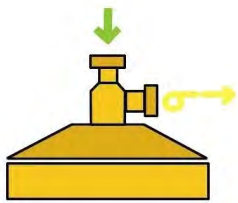
## Milk clarification

Remove the mechanical impurities mixed with fresh milk via a disc centrifuge (DGS series, two phase separation).



Liquid Feeding/Discharging Configuration

DGC series  
One liquid Phase



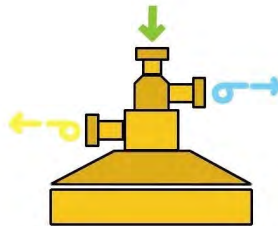
● Feeding Material

● Liquid Phase



Flow with Pressure

DGS series  
Two liquid Phase



● Feeding Material

● Light Phase

● Heavy Phase



Flow with Pressure



Flow with Pressure

Discharging Method



Manual Discharging

Shut down and open the bowl, manually remove the inside sediment by labor.



Automatic Discharging

Through Intermittent open lower parts of the bowl, sludge discharged automatically.



Continuous Discharging

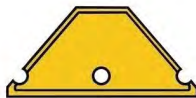
Sludge discharging achieve by the nozzles around the pericline.

Disc Separation



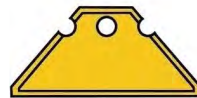
Clarification

Separate the solid particles from the liquid



Separation

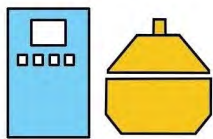
Separate a heavy liquid phase from major light liquid phase, meanwhile the suspended solid particles be separated as well. Maximum level of purified the light liquid phase.



Concentration

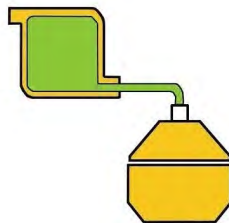
Separate a light liquid phase from major heavy liquid phase, meanwhile the suspended solid particles be separated as well. Maximum level of purified the heavy liquid phase.

Optional Components and Systems



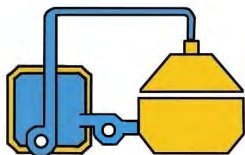
Electric Cabinet

Monitoring and adjustment of power , parameters setting and safety devices.



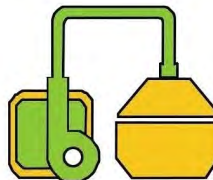
Gravity Feeding System

Ensure the material continuous and stable feeding to centrifuge.



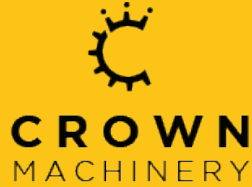
CIP Cleaning System

Control the system clean the separation components automatically.



Feeding Pump

Ensure the flow of material to the centrifuge is stable and adjusted automatically.



## 2 0 1 7 C A T A L O G U E

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