

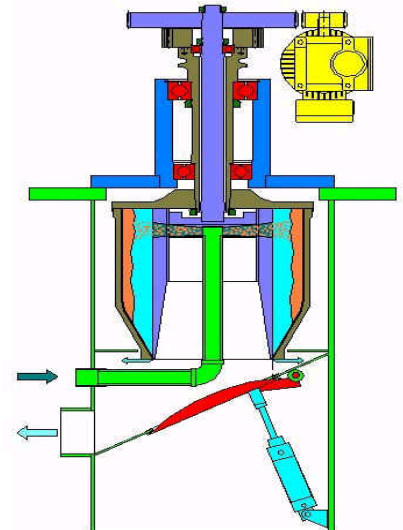


The US Centrifuge model A400 is an economically priced fully automatic self-cleaning centrifuge technology for liquid / solid separation. These machines are used for a variety of fine particle separation / filtration and solids dewatering applications.

The A400 is designed to efficiently process from 5 up to 20-gpm and features 2.0-gallons of solids holding capacity. The machine is available in either standard carbon steel or optional stainless steel construction.

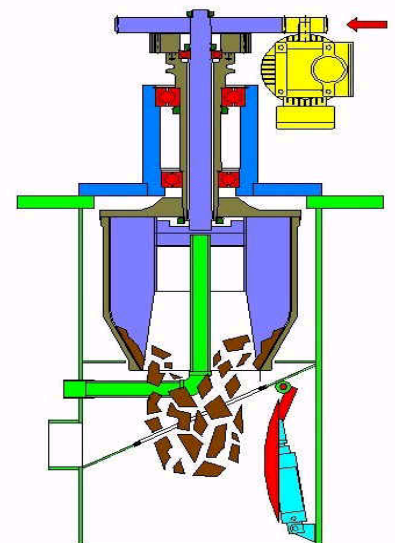
The continuous process of separating solids from the liquid:

The liquid continuously feeds through a stationary vertical feed pipe mounted in the frame cabinet. The liquid sprays into a distribution chamber where the plow blades serving as liquid impellers direct the liquid into the spinning bowl. The liquid enters the bowl at the top of the liquid pool where it must travel around the efficiency ring into an area of higher centrifugal force before flowing downward and overflowing the bottom lip of the bowl shell under less centrifugal force. As the liquid travels this path the solids separated and deposit on the internal wall of the bowl shell forming a relatively moisture free solids cake, which is intermittently removed during the cleaning process. The liquid overflowing from the bowl collects in the lower frame and drains out the discharge fitting. The length of a process cycle is application specific depending on the flow rate and percent solids in the incoming liquid.



Separates particles as small as 10 microns

The periodic automated batch self-cleaning process: Once the centrifuge has filled its available solids holding space with centrifugally separated and compacted sludge the machine must stop and plow the material from the bowl. When the machine transitions from the process cycle to the clean cycle it stops the incoming feed via an automatic valve and the spinning bowl coasts to a complete stop. Once the unit has reached a complete stop the free liquid drains from the bowl into the lower frame and back to the source. Then a pair of pneumatically controlled actuators open the sludge chute cover and engage the dual meshing plow gears. Then the plow-motor rotates the plow blades slowly back and forth while the lock-ring / lock-block mechanism holds the bowl stationary as the solids are scraped out and fall through the sludge chute and into a hopper or drum placed below the unit.



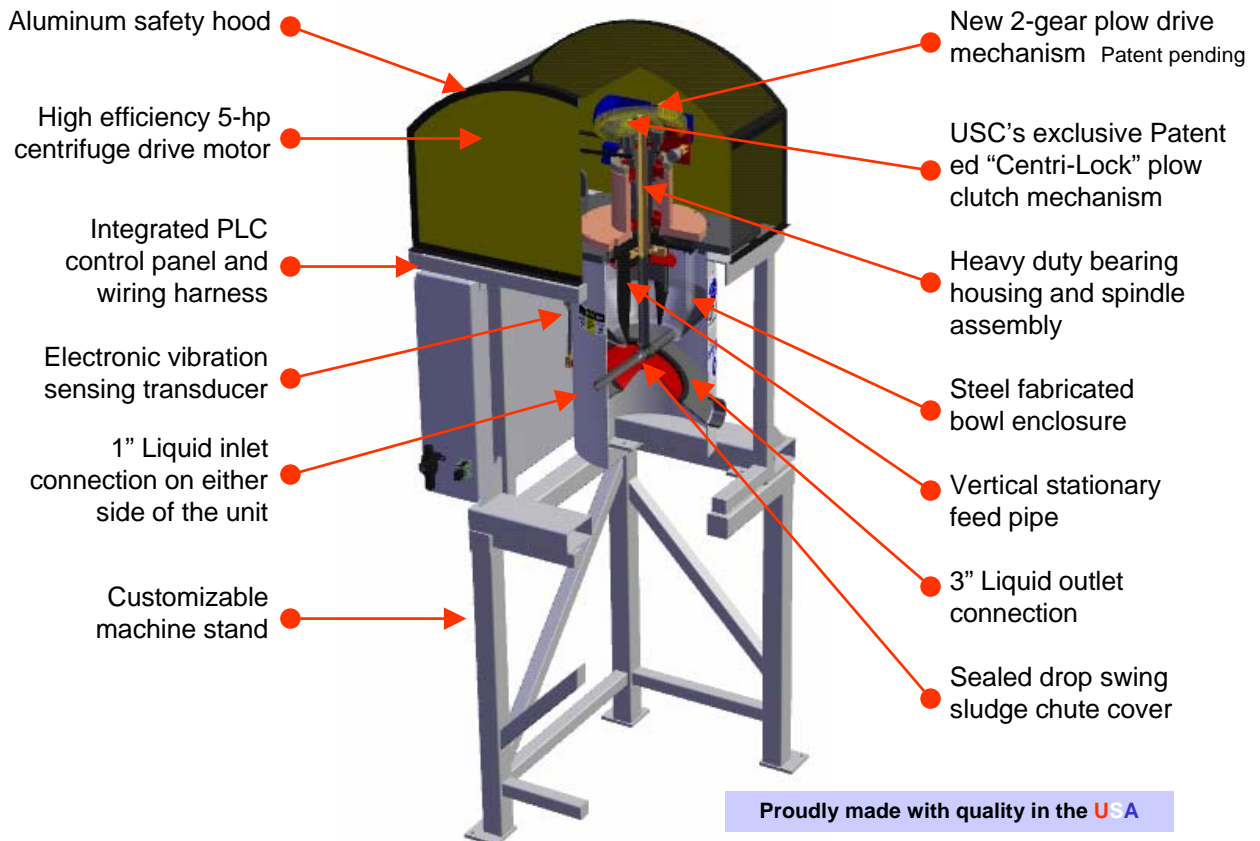
A typical clean cycle requires less than 5-minutes

The A400 was designed with innovative cost effective features and integrated processing advantages you will not find on competitive units. This unique design is competitively priced and offers what is arguably the best constructed, most efficient machine in its class.

Superior separating efficiency is the result of a maximized liquid flow path through the centrifuge bowl to increase liquid retention time combined with the “Centri-Lock” plow-clutch and a three-bladed plow assembly with an efficiency ring to minimize liquid turbulence. This maximizes the separation potential of each process cycle from start to finish. And, after the solids material has been separated a strong gear driven plowing mechanism will remove even the toughest cake.

Mechanically the A400 is a “hanging” design, which is smooth and very stable. The machine is simple and inexpensive to maintain with an estimated bearing life of 1 to 3-years depending on working conditions. Removing the rotating assembly can be done in a matter of minutes and the bowl enclosure can even be easily unbolted and removed.

A highly functional yet simple to operate PLC based control panel with operator interface provides for easy process time adjustments and function messages. And the control pan includes a standard 5-hp variable frequency drive to control and adjust the centrifuge motor RPM and ac-cell / de-cell ramps. The control panel comes pre-mounted and integrally wired with the unit.





Standard Machine Specifications:

- Maximum flow rate: 20-gpm
- Solids holding capacity: Up to 2.0 gallons
- Maximum sludge discharge: Up to 8.0-gallons / hour
- Maximum "G" force: 1,500-x gravity
- Liquid inlet fitting: 1" NPT
- Required inlet pressure: 10-psi @ 20-gpm
- Maximum temperature: 160°F
- Standard Ph range: 6 to 9
- Liquid discharge fitting: 3" NPT
- Liquid discharge pressure: Gravity return
- Liquid discharge height: 38" off floor
- Noise level: 72 dB (A) per 8-h

