CENTRIFUGAL SEPARATORS General Applications Bulletin



Centrifugal Separation....

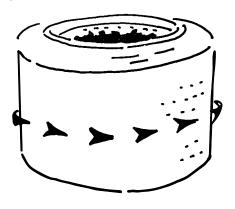
Concepts & Methods

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CONCEPT —
Centrifugal Force
The physics of
centrifugal force
make it easy to
separate materials

separate materials of different weight, densitiy or gravity. The speed of basket, or any circular vessel, is strongly amplified at the edge of the rotating vessel. This force at the edge is a function of how fast the entire vessel spins, and the width of the vessel. The wider the vessel is, the greater the centrifugal force becomes at the same speed.

BEP centrifuges are manufactured with a self-balancing, perforatewalled basket. Unlike other machines which rely on external shock absorbtion paraphenalia, BEP centrifuge baskets are counterweighted at the bottom to create a flywheel effect during operation. Like a gyroscope, BEP baskets quickly achieve a state of self-equilibrium as they come up to operating speed. The result...smooth and rapid separation of just about any liquid/solid combination. The solids are retained in the centrifuge basket. The liquid is squeezed out, and drained through the bottom of the outer containment shell. Like other centrifuges, our standard systems are operated on a vertical axis. Only our semi-automatic system, The Tornado, is designed to operate on a horizontal axis.



Product Handling

Methods

Automatic....

The new Tornado™ system is a revolutionary new design, which can process your materials on a non-stop basis. The heart of the system is a set of processing conveyors which take materials in at a pre-determined time interval, come up to speed on a horizontal axis, and then slow down to discharge your product when your processing objective has been achieved. Operated by a programmable controller, the Tornado™ is available in two versions, capable of processing up to 6,000 lbs/hr of materials, with NO MANUAL LABOR.

Single Load...

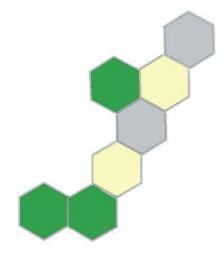
LIQUID/SOLID COMBINATIONS—

...most BEP systems are designed to process product on a single-load basis. Loading, processing, and unloading can usually be accomplished in less than 5 minutes. This time frame depends, of course, on your processing goals. For dewatering relatively dense items, such as "O" rings or small fasteners, it can be possible to achieve your objective in less than 60 seconds.



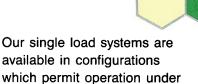
LIQUID-BASED COMBINATIONS—

...slurries or other liquid-borne mixtures can be piped into the centrifuge while in operation. Processing flow rates up to 12-gallons per minute, depending upon filtration objectives, your BEP centrifuge can be run until sediment reaches the weight capacity of the model in use.



Model Types

- Explosion Proof
- •USDA
- Standard



EXPLOSION PROOF—

a variety of conditions.

designed to allow for the handling of flammable solvents or materials. All metal-to-metal surfaces are made of stainless steel. All control devices and circuits are rated for explosion-proof service. Most control mechanisms are pneumatically operated. Available only on single-load systems.

USDA-

designed to meet USDA standards for processing food products. All seams, welds, and fillets filled with weld, and ground smooth. Available on any system.

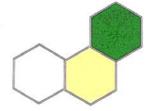
Specifications & Features Single Load Systems

MODEL	BASKET WIOTH/DEPTH	RPM/G-FORCE	VOLUME (CF)	INTERNAL/EXT SURFACES	DRY WT CAPACITY (LBS)
1200PL	30 x 18	1200/650	7.36	SS 316 / 304	130
1100PL	30 x 16	1700/1200	6.54	SS 316 / 304	100
900PL	24 x 14	1700/980	5.73	SS 316 / 304	60
800PL	20 x 12	1700/700	2.18	SS 316 / 304	35
955	30 x 18	1200/650	7.36	SS 304 / 304	130
755	30 x 16	1700/1200	6.54	SS 304 / 304	100
655	24 x 14	1700/980	5.73	SS 304 / 304	60
355	20 x 12	1700/700	2.18	SS 304 / 304	35
GP130	30 x 18	1700/1200	6.54	SS 304 / MS	130
GP100	30 x 16	1700/1200	6.54	SS 304 / MS	100
GP60	24 x 14	1700/980	5.73	SS 304 / MS	60
GP35	20 x 12	1700/700	2.18	SS 304 / MS	35
FP90	30 x 18	1200/650	7.36	SS 304 / 304	130
FP805	30 x 16	1700/1200	6.54	SS 304 / 304	100
FP605	24 x 14	1700/980	5.73	SS 304 / 304	60
FP305	20 x 12	1700/700	2.18	SS 304 / 304	35
805TX	30 x 16	1700/1200	6.54	SS 304 / 304	100
605TX	24 x 14	1700/980	5.73	SS 304 / 304	60
305TX	20 x 12	1700/700	2.18	SS 304 / 304	35



TORNADO SPECIFICATIONS					
MODEL	MK1	MK2			
Capacity	*4000 lbs/hr	*6000 lbs/hr			
Cycle Time	155 seconds	155 seconds			
Voltage	480/60/3	480/60/3			
Motor HP	40 HP	60 HP			
Net Weight	5000 lbs	6000 lbs			
Shipping Wt.	7500 lbs	8500 lbs			
Max Ht.	96 inches	96 inches			
Max Width	96 inches	96 inches			
Max Depth	144 inches	144 inches			
RPM	750 RPM	750 RPM			
Cylinder Diameter	27 inches	27 inches			

^{*}Based on Bulk Density of 20 lb/cf



Product Selector Guide

APPLICATION	SERIES SELECTOR				
General Laboratory	"TX" series				
Food Processing	"FP" series				
General Purpose	"GP" series				
Explosion Proof	"55" series				
Pilot Plant	"PL" series				
Portable Applications any series					
Automatic Product					
Handling	"Tornado" Mk1 or Mk2				



BOCK ENGINEERED PRODUCTS, INC.

3600 Summit Street • Toledo, Ohio 43611 USA Phone (419) 726- 2645 • Fax (419) 726-8583