



CENTRI-SIFTER™

Centrifugal Screeners

*for sifting, scalping, de-agglomerating
and dewatering of powder
and bulk solids and slurries*

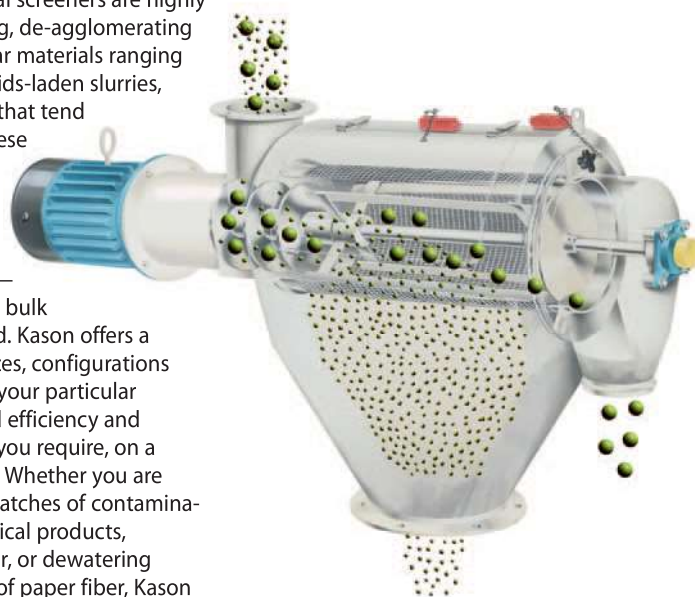


Sift, scalp, de-agglomerate and dewater virtually any bulk solid or slurry

CENTRI-SIFTER™ centrifugal screeners are highly effective at sifting, scalping, de-agglomerating and dewatering of granular materials ranging from dry bulk solids to solids-laden slurries, including moist materials that tend to ball or agglomerate. These screeners are widely used in the chemical, food, dairy, pharmaceutical, plastic, mineral and packaging industries—virtually any field in which bulk solid materials are handled. Kason offers a broad range of models, sizes, configurations and accessories to screen your particular material with unsurpassed efficiency and dependability, at the rate you require, on a batch or continuous basis. Whether you are sifting 50 lb/h (23 kg/hr) batches of contamination-sensitive pharmaceutical products, scalping 80 tons/h of sugar, or dewatering 400 gal/m (1800 litres/m) of paper fiber, Kason offers a CENTRI-SIFTER centrifugal screener to maximize the quality of your process while minimizing cost.

Features

- Dust-free, sanitary operation. Approved for use by FDA, BISSC, 3-A and other U.S. and European standards
- Quiet, vibration-free operation
- One- to two-minute screen changes depending on model
- Easy clean-out
- Double seal outboard bearings
- Rapid sieving action
- Heavy duty construction for batch or continuous operation
- Compact design
- Low power requirements
- Integral cleaning/inspection door(s)
- Many sizes and single or twin models, including belt-driven units with motors from 1 hp (.75 kW) to 7.5 hp (5.60 kW) and direct-driven units with motors from 1 hp (.75 kW) to 3 hp (2.25 kW)



Material is fed by gravity or pneumatically into the feed inlet and redirected into the cylindrical sifting chamber by means of a feed screw. Rotating, helical paddles within the chamber continuously propel the material against the screen, while the resultant centrifugal force on the particles accelerates them through the apertures. These rotating paddles, which never make contact with the screen, also serve to breakup soft agglomerates. Oversize particles and trash are ejected via the oversize discharge spout.

Broad model range solves specialized problems

CENTRI-SIFTER centrifugal sifters are designed for gravity-fed applications and for sifting in-line with pneumatic conveying systems. They are available as single and twin models and low profile units, and offered in a broad range of standard, modified and custom configurations. All are available with belt drive or direct drive. Units may be free-standing or adapted for easy mounting on new or existing process equipment.

CENTRI-SIFTER separators meet the most stringent worldwide sanitary standards including FDA, 3-A, and BISSC. Special finishes and materials also make these sifters suitable for biochemical and pharmaceutical applications.

Screen options

The choice of separating media includes nylon and other mono-filament cloth, woven wire in selected metals, perforated plate screen, and wedge wire. Wedge wire screens are preferred when sifting large, dense particles with angular shapes, oversize lumps or when contaminating debris must be prevented from entering processing streams. Kason's wedge wire screens are rugged and provide a high degree of on-stream reliability.

Anti-blinding devices speed production, reduce maintenance

Kason offers a variety of devices that increase production by combating screen blinding. These devices reduce the clearance between the rotating paddle and the cylindrical screen without contacting or abrading the screen. Narrowing the gap between the rotating element and the screen surface enhances screening rates under near size conditions, thereby increasing throughput.



Rubber wiper blades handle fibrous material that would otherwise become entangled in brush bristles or wrap around serrated edges. Rubber blades allow oversize particles to pass by the rotating blade, and are also effective in liquid/solids separations.

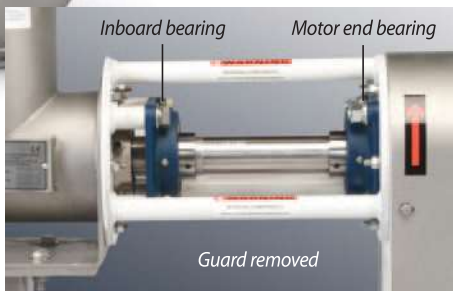
Integral air brushes keep screens clean when processing with fine meshes that would be susceptible to damage or abrasion by mechanical anti-blinding devices. Air enters at the end of the hollow drive shaft and exits through multiple air nozzles, blowing the screen clean.

Brushes are flexible, and maintained approximately 1/16 to 1/8 inch (1.6 to 3.2 mm) away from the screen surface to prevent damage, while allowing desired particles to pass easily through the screen openings.

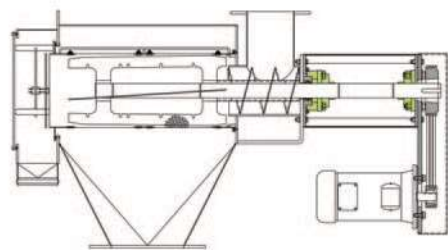
QUICK-CLEAN Centrifugal Screeners with Cantilevered Shafts



Two-bearing models of QUICK-CLEAN CENTRI-SIFTER™ centrifugal screeners require no bearing on hinged end cover (shown opened, above).



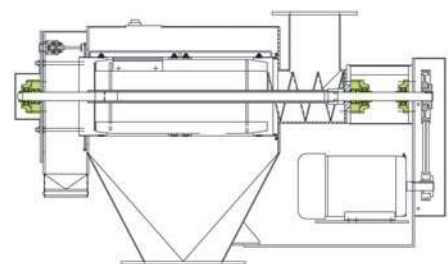
Large diameter shaft and wide spacing between bearings enable two-bearing models to operate at high speeds, free of vibration.



Two-bearing designs utilize one motor-end bearing, and one inboard bearing adjacent to the material infeed chute (no bearing on end cover).



The hinged end cover is opened using quick-disconnect clamps, allowing the retaining plate, screen and paddle assembly to slide freely from the cantilevered shaft. Note: Two-bearing model shown requires no bearing on end cover.



In addition to one motor-end bearing and one inboard bearing adjacent to the material infeed chute, three-bearing designs incorporate a bearing on the exterior of a hinged cover at the discharge end of the screener.

Three-bearing models support shaft ends

In addition to a motor-end bearing and an inboard bearing, three-bearing models position a bearing on the exterior of the hinged cover at the discharge end of the screener, providing maximum support for the highest capacities and heaviest loads. When the end cover is opened, the bearing slides off of the shaft, which cantilevers on the inboard bearing, allowing rapid removal of internal components.



Rapid removal of internal components with no sacrifice in performance

QUICK-CLEAN CENTRI-SIFTER centrifugal screeners feature cantilevered shafts that allow quick, tool-free removal of internal components through a hinged end cover, for rapid cleaning, screen changes and inspection.

Two-bearing models are configured with one motor-end bearing, and one inboard bearing located exterior of the material infeed chute (no bearing required on end cover).

Three-bearing models additionally have a third bearing located on the hinged cover at the discharge end of the screener, providing maximum support to handle the heaviest loads and highest capacities.

All Kason QUICK-CLEAN screeners are constructed of stainless steel with optional sanitary finishes suitable for pharmaceutical, food and dairy applications, as well as industrial applications involving frequent screen changes, inspections or runs of multiple materials with no cross contamination.

Standard Gravity-Fed Centrifugal Screeners



Sift, scalp, de-agglomerate and dewater at high rates

CENTRI-SIFTER™ centrifugal screeners separate solids from solids or solids from slurries at high rates. Rotating helical paddles propel on-size particles or liquids through a cylinder of woven nylon monofilament or stainless wedgewire screen, and serve to break up agglomerates and handle difficult-to-separate materials. Standard models provide access doors for cleaning, screen changing and inspection. Available to industrial and sanitary standards.

QUICK-CLEAN Screeners with Cantilevered Shafts



Two- and three-bearing models satisfy medium- to high-capacity applications

QUICK-CLEAN CENTRI-SIFTER centrifugal screeners feature cantilevered shafts that allow quick, tool-free removal of internal components through a hinged end cover. Two-bearing models (shown) have one motor-end bearing, and one inboard bearing adjacent to the material infeed chute (no bearing on end cover). Three-bearing models have an additional bearing on the hinged end cover for heavier loads and higher capacities.

Centrifugal Dewatering Screeners



Extracts more moisture than conventional screeners while boosting capacity

An incline adjustable up to 40° increases the dwell time of material within the chamber and the drainage rate of free liquid, while causing moisture to remain near the downhill inlet of the cylindrical screen, resulting in greater dryness of discharged solids. A full length, low-pitched internal auger feeds high loadings of material into the screen cylinder as rotating paddles impart centrifugal force.

PNEUMATI-SIFTER™ Centrifugal Screeners



Screens in-line with pneumatic conveying systems at high rates

PNEUMATI-SIFTER screeners de-agglomerate and sift materials in-line with dilute-phase pneumatic conveying systems, eliminating the need for cyclone separators and rotary air lock valves. These high capacity units propel on-size particles through apertures in a cylindrical screen, while oversize particles are ejected through a manual or automatic valve into a sealed, quick-release receptacle. Positive pressures to 14.9 psig (1 barg), negative pressures to 14 in. (356 mm).

Centrifugal Screeners with Bag Dump Station



Removes oversize contaminants while protecting against dust

An integral dust collector protects against dust contamination while the CENTRI-SIFTER screener removes bag scraps and other oversize contaminants from manually dumped bulk materials. Short blasts of air inside filters dislodge the build up of material, which falls into screener. Configured for mezzanine installation, the system gravity-discharges into process equipment, and affords a sufficiently low deck height for sack and container handling.

Miniature Centrifugal Screeners



Screens small batches of contamination-sensitive products

Miniature centrifugal screener scalps, de-agglomerates and dewater small batches of pharmaceutical powders, powder coatings, food products, and other contamination-sensitive products. In less than one minute, with no tools, the unit's end plate, cylindrical screen and shaft-mounted paddle assembly can be removed, providing access to sanitize all material contact surfaces. Available to FDA, 3A, BISSC and other standards.

Typical Applications



Toll processor scalps cryogenically-ground engineering resins at -50° to -275°F (-46° to -170°C). QUICK-CLEAN design allows changing of screens before ice can form.



Co-packer of powdered beverage mixes met new regulations by sanitizing more frequently, compensating for the productivity loss by sanitizing faster with a QUICK-CLEAN screener.



In 12 minutes, CENTRI-SIFTER™ screener sifts 4000 lb (1814 kg) of polymer concrete discharged from pneumatic blender, while eliminating previous screen blinding problem.



Flavor powder producer switched from a vibratory screener to a QUICK-CLEAN CENTRI-SIFTER screener, boosting output 150 percent while cutting wash down time.



Producer of 200 dairy blends having bulk densities of 25 to 60 lb/cu ft (400 to 960 kg/cu m) screens directly into sacks by weight at rates to 25 lb/min. (11.3 kg/min.)



CENTRI-SIFTER screener removes oversize particles from on-size powders at temps to 450°F (233°C) and rates to 1000 lb/h (453 kg/h) while reducing agglomerates.



Producer of aquaculture feed, high in lipids, screens down to 300 microns (0.3 mm) 60-times faster than with vibratory screener while eliminating screen blinding.



CENTRI-SIFTER screener simultaneously mixes a flow aid with finely ground rubber, breaks up soft agglomerates and removes fiber and steel debris from on-size material.



Blender discharges into low profile, QUICK-CLEAN, CENTRI-SIFTER screener that removes oversize particles and discharges on-size material into mobile storage vessels.



Large toll processor screens plastics, additives, foods and pharmaceutical products using mobile CENTRI-SIFTER screeners configured on caster-mounted stands.



Compact CENTRI-SIFTER screener fits a restricted space between a blender and fiber drums being filled with 100 lbs (45 kg) of screened food ingredients.



Twin Ultra-High Capacity QUICK-CLEAN Screener matches the throughput of two individual units within a smaller footprint, while cantilevered three-bearing shafts allow rapid sanitizing.

Typical Capacities*

INDUSTRY	MATERIAL	TYPICAL CAPACITY RANGE
Food and Dairy	COCOA POWDER	1-50 TPH
	FISH MEAL	1-30 TPH
	FLOUR	1-50 TPH
	GROUND COFFEE	1-20 TPH
	LACTOSE	5-300 GPM (20-1850 LPM)
	MILK POWDER	1-30 TPH
	NON-DAIRY CREAMER	1-50 TPH
	SPICES	1-40 TPH
	STARCH	1-50 TPH
	SUGAR	1-80 TPH
	TOFU	5-200 GPM (20-900 LPM)
Chemical	CALCIUM STEARATE	1-15 TPH
	EXPANDED SILICA	0.5-4 TPH
	HYDRATED ALUMINA	1-20 TPH
	IRON OXIDE	1-30 TPH
	LATEX	5-200 GPM (20-900 LPM)
	PAPER FIBER	5-400 GPM (20-1800 LPM)
	PIGMENTS	1-30 TPH
	POLYMER BEADS	5-250 GPM (20-1150 LPM)
	POWDER COATINGS	1-15 TPH
	TiO ₂ SLURRY	5-250 GPM (20-1150 LPM)
Mineral	CALCIUM CARBONATE	1-50 TPH
	EXPANDED PEARLITE	0.25-5 TPH
	GYPSUM	1-70 TPH
	MICA	0.25-5 TPH
Plastics	ADDITIVES	1-50 TPH
	COMPOUNDS	1-70 TPH
	MICROSPHERES	1-50 TPH
	VIRGIN RESIN	1-50 TPH
Misc.	CELLULOSE	0.25-4 TPH
	FOUNDRY SAND	1-50 TPH
	WOOD FIBER	1-10 TPH
	SUPER ABSORBANT POLYMER (SAP)	1-20 TPH

*Bulk materials listed are a sampling of hundreds of products screened using CENTRI-SIFTER centrifugal screeners. Capacity ranges shown may vary by application.



VIBROSCREEN®
Multi-Deck Vibratory
Classifiers



VIBROSCREEN®
High-Capacity
Classifiers



VIBROSCREEN®
QUICK-CLEAN AIR-LIFT
Designs



VIBROSCREEN®
Quick-Disconnect
Clamshell Designs



VIBROSCREEN®
FLO-THRU™ Low-Profile, High-
Capacity Vibratory Screeners



VIBROSCREEN®
FLO-THRU™ Vibratory Screeners
with Air-Lift Device



VIBROSCREEN®
Bag Dump Screening
Stations



VIBROSCREEN®
PNEUMATI-SIFTER™
High-Capacity Screeners



VIBROSCREEN®
Internal Recycle KASCADE™
Screening Decks



VIBROSCREEN®
Batch Sifters



KASONIC® Ultrasonic
Anti-Blinding Devices



Circular Vibratory
Fluid Bed Dryers, Coolers,
Moisturizers, Agglomerators

KASON CORPORATION

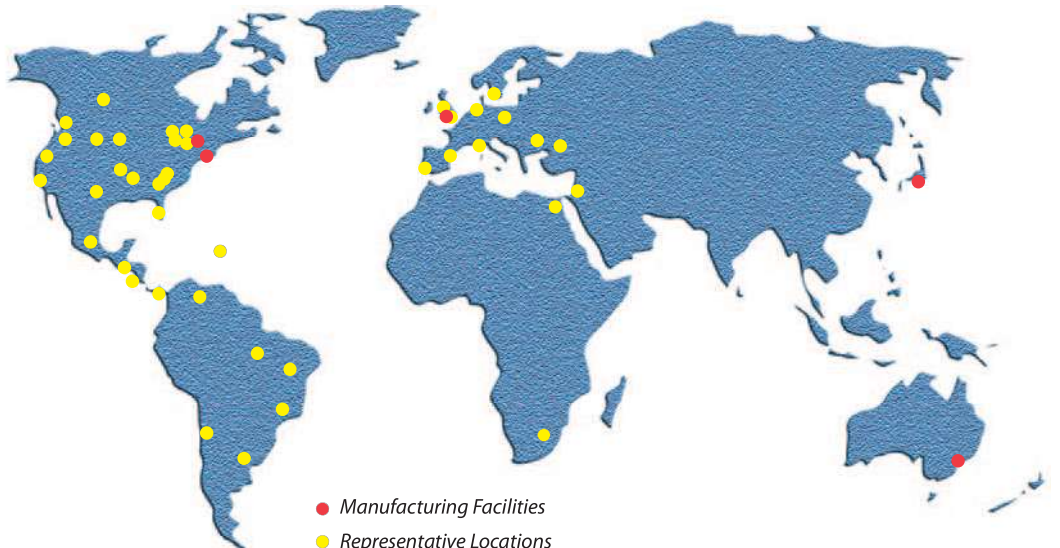
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