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.

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.

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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.

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QUICK-CLEAN Centrifugal Screeners with Cantilevered Shafts

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.

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

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.

Inboard bearing Motor end bearing

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

Guard removed

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

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.

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.
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.

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).

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.

Miniature Centrifugal Screeners

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.

Screens small batches of contamination-sensitive products

Miniature centrifugal screeners 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 concrete, while eliminating previous screen blinding problem.

Quick-Clean design allows changing of screens before ice can form.

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**Typical Capacities**

<table>
<thead>
<tr>
<th>INDUSTRY</th>
<th>MATERIAL</th>
<th>TYPICAL CAPACITY RANGE</th>
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</thead>
<tbody>
<tr>
<td>1-50 TPH</td>
<td>COCOA POWDER</td>
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<tr>
<td>1-30 TPH</td>
<td>FISH MEAL</td>
<td></td>
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<tr>
<td>1-50 TPH</td>
<td>FLOUR</td>
<td></td>
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<tr>
<td>1-20 TPH</td>
<td>GROUND COFFEE</td>
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<tr>
<td>5-300 GPM (20-1850 LPM)</td>
<td>LACTOSE</td>
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<tr>
<td>1-30 TPH</td>
<td>MILK POWDER</td>
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<tr>
<td>1-50 TPH</td>
<td>NON-DAIRY CREAMER</td>
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<tr>
<td>1-40 TPH</td>
<td>SPICES</td>
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<td>STARCH</td>
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<tr>
<td>1-80 TPH</td>
<td>SUGAR</td>
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<tr>
<td>5-200 GPM (20-900 LPM)</td>
<td>TOFU</td>
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<tr>
<td>1-15 TPH</td>
<td>CALCIUM STEARATE</td>
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<td>0.5-4 TPH</td>
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<td>IRON OXIDE</td>
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<td>5-200 GPM (20-900 LPM)</td>
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<td>5-400 GPM (20-1800 LPM)</td>
<td>PAPER FIBER</td>
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<tr>
<td>1-30 TPH</td>
<td>POLYMER BEADS</td>
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<td>5-250 GPM (20-1150 LPM)</td>
<td>POWDER COATINGS</td>
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<tr>
<td>1-15 TPH</td>
<td>TiO2 SLURRY</td>
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<tr>
<td>1-20 TPH</td>
<td>SUPER ABSORBANT POLYMER (SAP)</td>
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*Bulk materials listed are a sampling of hundreds of products screened using CENTRI-SIFTER centrifugal screeners. Capacity ranges shown may vary by application.