Johnson Screens

Pulp and Paper Screens

A brand of Aqseptence Group

Global Footprint

Johnson Screens has been engineering and manufacturing screens since 1904 and has a storied history of innovation and problem solving in the Pulp and Paper industry.

The first patented manufacture process for contoured wire pressure baskets for the Pulp and Paper industry, was developed by Johnson Screens. This patented technology, has increased screening efficiencies and lowered energy consumption in the market.

Johnson Screens' worldwide service and manufacturing capabilities, allows for the design and production of screens with the most consistent slot opening in the industry. This process produces screens that will preform to the desired specifications.

With the ability to manufacture screens in a wide range of sizes to for any industry, Johnson Screens' dedicated team will deliver the required products, in a timely manner, to ensure your plant is running smoothly and meeting the required results.

Johnson Screens has various products for the pulping process, ranging from the smallest screening applications to components for the OCC lines.

Johnson Screens offers a wide range of pressure screen baskets, extraction plates, side hills, screen press cylinders, intake screens, coating strainers, shower screens, and many other screens for the Pulp and Paper industry.

Whether using mechanical, chemical or recycle fiber pulping methods, Johnson Screens can provide the equipment needed to make the finest quality pulp at competitive costs.

- **Digester screen baskets and segments**
- **Extraction plates**
- **Gravity fed bow screens and panels**
- **Pressurized bow screens and panels**
- **Pressure screens and baskets**
- **Pressure screen filters and rotors**
- **Pulper plates and pulper rotors**
- **Reject drums and baskets**
- **Reject flow control**
- **Screw presses and baskets**

Pressure Screens

When combined with low screen loading and low-pulse rotors, Johnson Screens' fiber baskets can yield significantly improved shive removal, enhance physical pulp properties, and in some cases, reduce electrical power consumption.

The design of the Vee-Wire® fiber basket, produces a continuous slot over the length of the basket. Vertical parallel rods, or wires, are arranged in a circle to form a cylindrical shape. The wires are held mechanically in place with metal bands or rings. The size of the gap, or slot, between the wires is precisely set — typical values are 0.10 mm, 0.15 mm, and 0.20 mm. The angle of the wedge and the amount that the wedge protrudes into the stock (i.e., the profile) effects screen performance.

By comparison, conventional slotted baskets are built from rolled sheet metal. Parallel slots, each several inches long, are cut into the sheet metal, leaving land areas between each slot to provide mechanical strength to the basket. Vee-Wire fiber baskets, by virtue of the continuous slot and slender wires, has significantly less land area. This results in approximately twice the open area as the conventional basket for the same slot width.

For any given fiber basket, this advantage yields the following benefits:

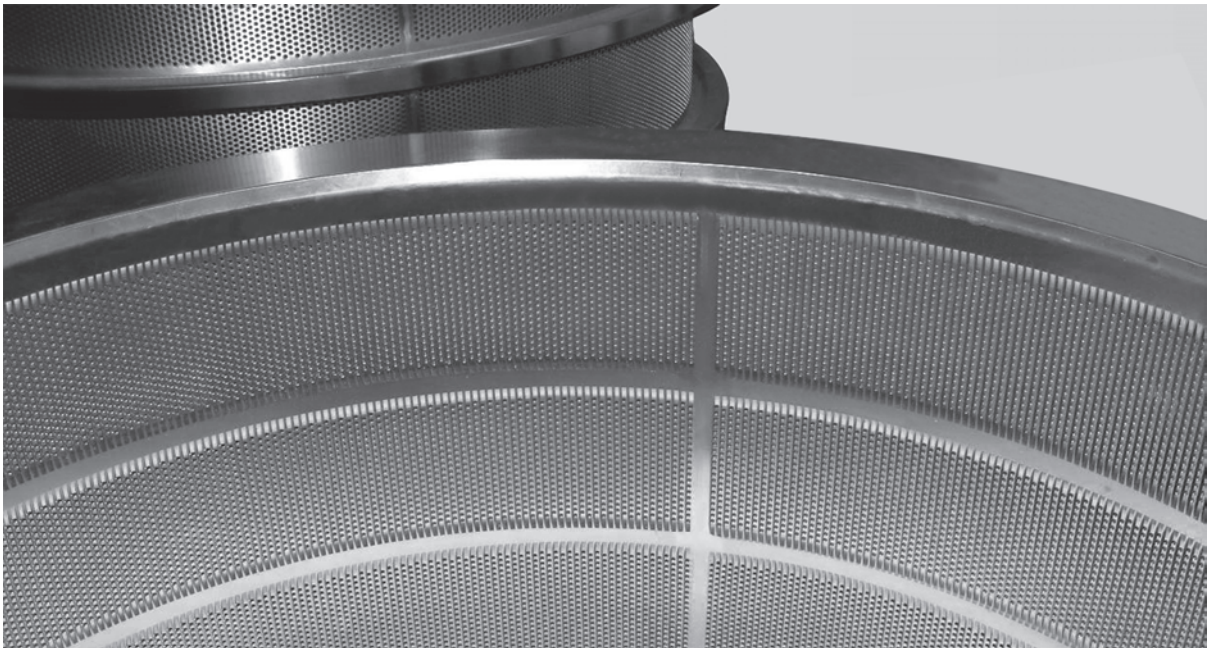
- Lower passing velocity for given production rate and slot width
- Higher production rate for a given slot width and passing velocity
- Finer slots for a given production rate and passing velocity.

Stark/Caged Screens

Johnson Screens' caged screens are designed to work in harsh environments. These screens use a reinforced stainless steel cage and are designed to give more rigidity and strength than other designs. Using a steel webbed structure, creates force multiplying strength to the rings and a stiffeners to reduce moments of inertia. With this design, Johnson Screens' caged screens distribute the pressure drops over a larger area of the structure increasing life and longevity.

Johnson Screens' caged screens are designed to be used and then discarded, they are not designed as a reusable cage and replaceable screen. Baskets can be re-chromed to add life to the screen, if done before the profile on the wire is worn and the slot opening is increased. If regular inspections are preformed, screens can be re-chromed multiple times before the needing to be replaced. Re-chroming expenses are generally significantly less than purchasing a new basket

Drilled Hole Screen Cylinder



Johnson Screens can provide both smooth plate and milled (contour) plate drilled hole cylinders. With the use of multi-axle drilling machines, and the same manufacturing process that are used to produce the slotted cylinders, Johnson Screens can provide high productivity drilled hole cylinders.

Rotors

Johnson Screens can supply rotors for all OEM models and screen types

Rotors are one of the keys to producing a quality fiber and are one of the cost drivers at a Pulp and Paper plant. Johnson Screens' rotors reduce energy consumption and allow for a more energy efficient plant.

Johnson Screens' rotors can do the following to improve your plants operations:

- Create gentle pulsation to clean stock
- Increase pulsation frequency and increase capacity
- Reduce water consumption
- Reduce energy consumption
- Increase consistency of the pulp

Johnson Screens can help you reduce plant costs and improve the quality of the pulp by designing a rotors that will optimize your processes.

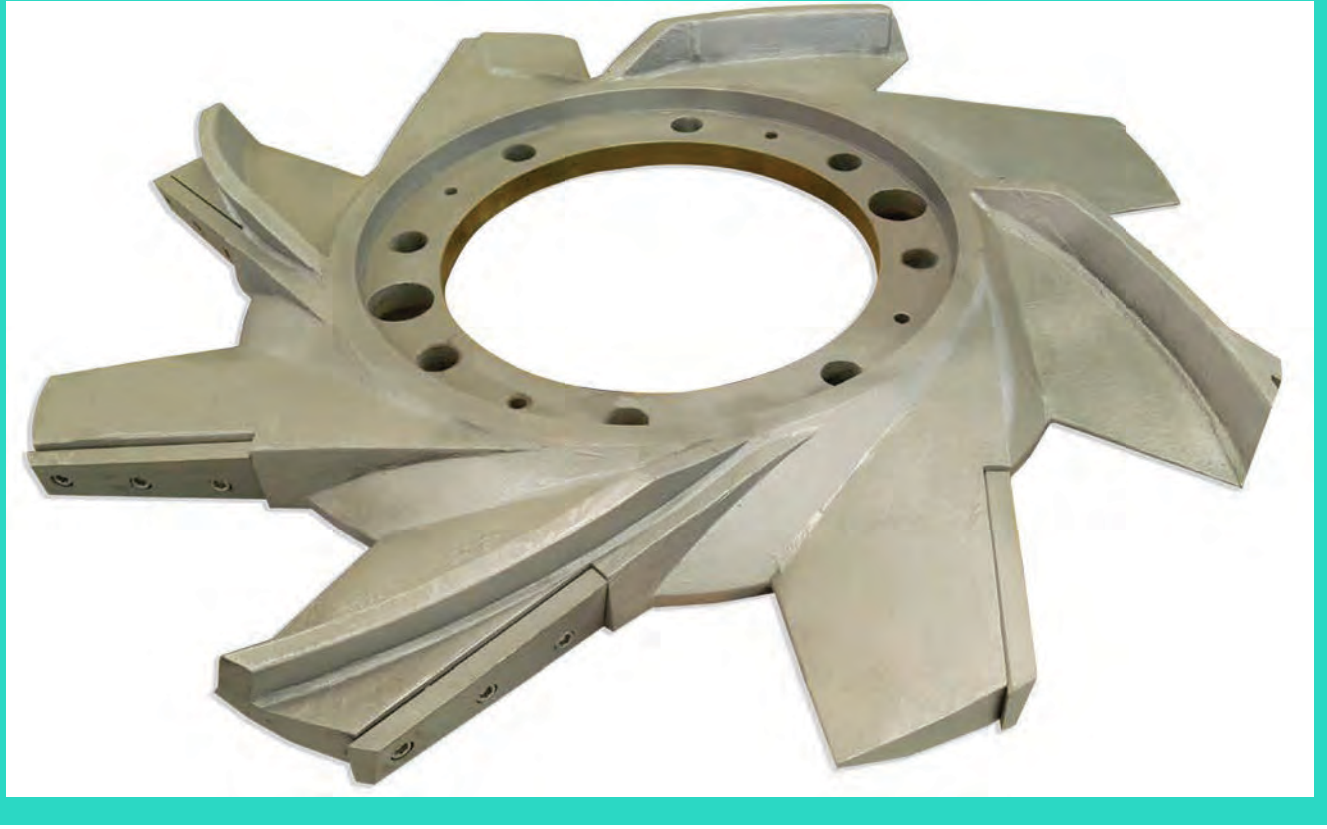
Extraction Plate

Johnson Screens can provide all variations of extraction plates for pulpers, detrashers, deflakers, and other equipment. Materials offered are 304ss 316Lss, 410ss, and 410ss heat treated to 400 brill hardness, stelite wear bars, chrome plating, heat treating of materials, and flipable plates

OEM Rotors

Johnson Screens can manufacture rotors for any OEM's equipment and model.

- Rotors are engineered and manufactured for your application
- Rotors are cast, machined and balanced for maximum efficiency
- Chrome hardened to suit your specifications
- Johnson Screens can also rebuild rotors

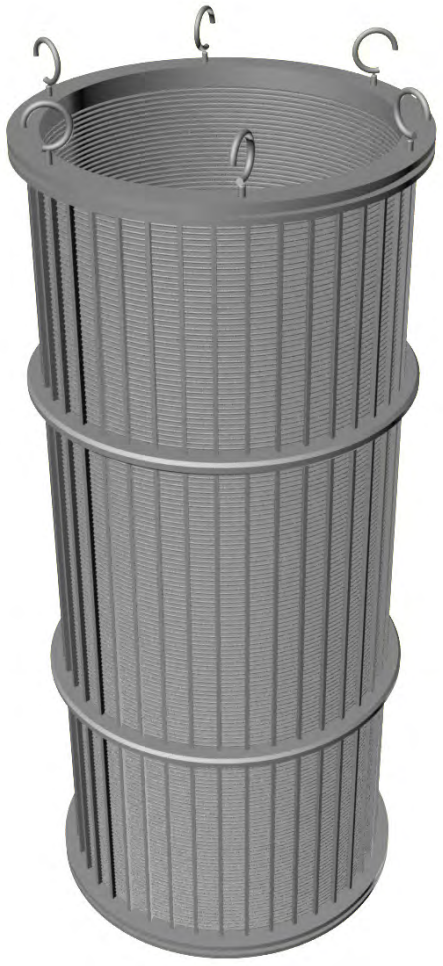


Side Hills/Bow Screens

Side hills, bow screens, sieve bends and DSM screens are know by many names across different industries.

Johnson Screens has been making bow screens from the start for numerous OEMs across the world and has one of the largest range of abilities in the market.

Johnson Screens can manufacture screens with an opening as small as 10 microns, and make static and inclined screens for a variety of applications.



Coating Screens

Johnson Screens is the leading producer of coating screens for the Pulp and Paper industry and the OEM market. If you're using coating screens in your process, chances are Johnson Screens manufactured them.

All of Johnson Screens' fine wire coating screens are manufactured to the tightest tolerances, and mating surfaces are machined for the best possible fit.

Coating screens are used in all applications from starch to kaolin, and many more.

Water Treatment Equipment

Johnson Screens can supply Regainer drum screens, channel screens, shaftless screw conveyors, drain screens, sand filters and many more pieces of equipment to help recover fiber and clean water.

With tougher regulations, Jonson Screens can help with compliance issues, improve water quality and provide products for EPA 316b regulations for fish protections.

Rotating Drum/Channel Screens

Johnson Screens' EMD Rotary Drum Screen are installed at a 35° angle and are used for trash screening and water treatment in the pulp and paper industry. These screens can be used for fine or coarse screening applications. This is a self-contained single unit. The screen drum is constructed out of Vee-Wire, however, perforated plate and mesh designs are also offered. EMD Rotary Drum Screen can also be installed either directly in the channel or in a separate tank.

An automatic spray system comprising of two pipes with nozzles operates when the screen drum rotates and keeps the drum clean.

Johnson Screens' EMD Rotary Drum Screen is capable of handling flow rates from 270 m^3/hr (1,188 gpm) to 4,600 m^3/hr (20,253 gpm) through a single unit. Slot sizes range from 0.5 mm (0.02 in.) to 6 mm (0.24 in.) on the Vee-Wire models and 2 mm (0.08 in.) upwards on the perforated plate and mesh models.

Triton® Underdrains

Designed with Johnson Screens' Vee-Wire® technology, Triton® Underdrains offer exceptional performance.

The Triton Underdrain construction, creates a low profile underdrain, with direct media retention, while maintaining a high open area with non-plugging characteristics. Available in stainless steel and PVC, Triton Underdrains offer high open area combined with direct media retention to optimize filtration efficiency.

Designed for the collection and distribution of water with direct retention of filtering media, Triton Underdrains are constructed from either stainless steel or PVC Vee-Wire, and U-shaped channel rods.

This design ensures a robust construction while the two point particle contact of the Vee-Wire reduces plugging. The Triton Underdrain system is the ideal alternative to block style underdrains. The Triton Underdrain provides a low profile and high open area percentage to optimize the efficiency of gravity flow media filter basins.

Adaptability

- Simple installation and custom manufactured to your specification
- Triton Underdrains are easily adapted to existing filters
- Low profile of the Triton Underdrains permits increased depth of media, resulting in more efficient filtering of older systems
- Design flexibility of the Triton Underdrain can be customized to suit the project needs, whether it is a new construction or a retrofit.

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