Vortex Fluid Systems Inc.

Serving our Customers Worldwide...

Orbital 3000

Company Goals

Since Vortex Fluid Systems founding, our goals have been simple. Serve our customers by creating the best performing and most durable shaker, with the best screen life of any shaker in the industry. With over 500 shakers in operation worldwide, and a loyal satisfied customer base, we have accomplished these goals, and are excited about what the future holds for ourselves and most importantly our customers.

Screen Seals

Our newly designed, patent pending screen seals snap into place and can be replaced as easily as replacing a set of screens.

Screen Life

Over the life of a shaker, the total cost of screens, will often amount to far more than the cost of a new shaker. In order to minimize user cost, VFSI has produced a shaker that has truly exceptional screen life. Our screens regularly last a month without needing to be replaced.

Cost Savings

The table below shows the cost savings using a Vortex Fluid Systems shaker versus other manufacturers shakers. Cost savings are based on a 4 screen shaker, with one set of screens used per month on a typical Vortex Fluid Systems Shaker. Because screen prices vary, price values of $250, $300 and $350 per screen are given. Brand 1 requires two screen changes per month, and Brand 2 requires 4 screen changes per month, and Brand 3 requires a whopping 8 screen changes per month. Cost savings are shown in the right three columns. ***In the first 3 years it would be common to save from $36,000 to $300,000 in screens by using the Vortex Fluid Systems shaker versus other shaker brands.***

Shaker Type	Usage Rate (Screen Changes Per Month)	Cost Per Screen	Cost Savings for 1 year	Cost Savings for 3 years	Cost Savings for 6 years
Brand 1	2	$250	$12,000	$36,000	$72,000
Brand 1	2	$300	$14,400	$43,200	$86,400
Brand 1	2	$350	$16,800	$50,400	$100,800
Brand 2	4	$250	$36,000	$108,000	$216,000
Brand 2	4	$300	$43,200	$129,600	$259,200
Brand 2	4	$350	$50,400	$151,200	$302,400
Brand 3	8	$250	$84,000	$252,000	$504,000
Brand 3	8	$300	$100,800	$302,400	$604,800
Brand 3	8	$350	$117,600	$352,800	$705,600

*cost savings based on one screen change per month of a Vortex Fluid Systems shaker

Recommendation

Justiss Oil Company has been using Vortex Fluid Systems, Inc. shale shakers for several years. We liked the performance so well we now run these shakers on all our rigs. We typically spud and complete wells with 210 mesh screens in all geographic areas where we work. The simple yet rugged design of this shaker is what the oilfield needs.

Product service from this privately owned company is excellent. The company owner is the designer of the shaker, and is available to discuss any aspect of the product, and has the authority to resolve any problem.

Sincerely,
J.F. "Jim" Justiss III
V.P. of Operations

Integrity
Reliability
Performance

Serving Customers Worldwide: www.vortexfluidsystems.com
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Orbital 3000

Performance
The Orbital 3000 has 30 ft² of screening area, making it one of the largest duals in the industry.

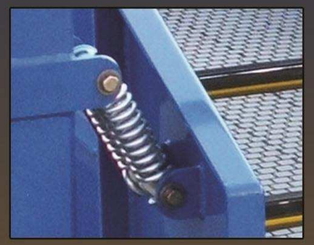
Durability
All baskets are fully *seal welded and stress relieved.* Seal welding reduces corrosion, adding years to machine life. The Orbital 3000 pretension screening machine requires minimal maintenance, even in oil based muds.

Corrosion Protection
Two layers of powder coat. Baked on zinc-rich epoxy first coat provides corrosion resistance. Final coat provides abrasion resistance. Most fasteners are stainless steel, providing excellent corrosion resistance.

Vibration Isolation
The Orbital 3000 is exceptionally quiet, due to efficient isolation, orbital motion and a sturdy base. With the machine running, it is possible to stand a nickel on edge at each corner of the machine.

Isolators

Stainless steel spring isolators provide superior isolation and corrosion resistance. An Orbital 3000 resting on flat concrete will not “walk”.



Screen Adjustment

The angle of the screen basket can be adjusted from 1 to 5 degrees from either side using a hand crank.

Electrical Box

The explosion proof electrical box is powder coated, has an “O” ring seal on the door and rubber boots on the switches. Customer wiring consists of hooking power to the terminal strip.

Bypass Gate

By adjusting a short pipe within the flow distributor, flow is spread evenly across the basket.

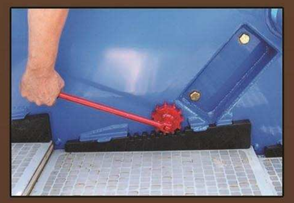
Wedge Block

The Orbital 3000 Dual comes with a tool box containing equipment for operation and basic maintenance of the Orbital 3000 shakers and Martin vibrators.

- wedge block installation tool
- ISOFLEX TOPAS NB 52 vibrator grease
- grease gun
- allen wrench set
- 1/4 in metric deep socket set
- extra isolator

Wedge Block Installation Tool

The wedge block installation tool simplifies wedge block installation and removal. This tool reduces the chance of screen damage.



Martin/Italvebras Vibrator

The Martin/Italvebras 5900 vibrators are exceptionally durable. The Martin/Italvebras vibrators are capable of delivering 6 g’s of vibration to the Orbital 3000.

Wedge Block

- Durable polyurethane wedge blocks hold screens securely in place.
- Manufactured with a steel insert for increased rigidity.

High Performance

The combination of screen surface area, high g's and screen motion makes the Orbital 3000 one of the best performing machines in the industry.

Screen Surface Area

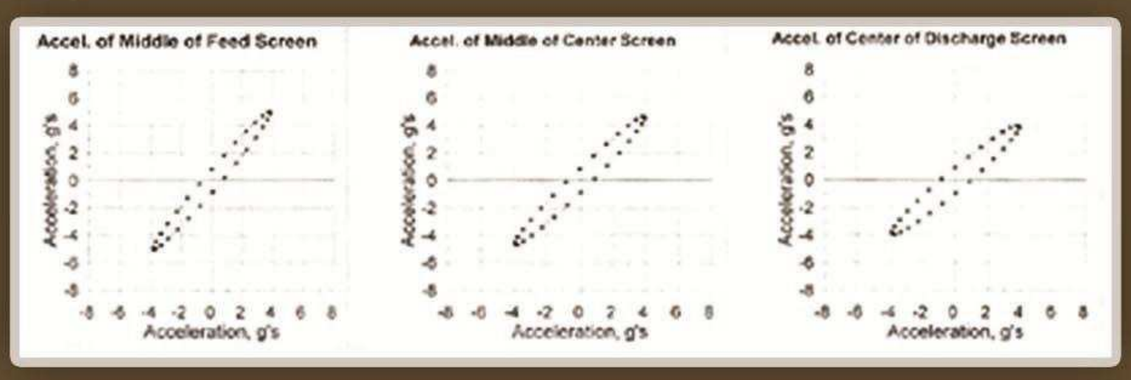
Screen Surface area to a great extent establishes the fluid throughput of the machine. The Orbital 3000 has 30 ft^2 of screening area. This makes the Orbital 3000 among the largest in the drilling industry. At the same time, the footprint of the machine is approximately 10 ft by 5 ft so that the machine fits on 10 ft wide tanks.

G-Forces

Increasing g's increases liquid throughput. Increasing g's also increases solids conveyance. By conveying solids out of the way, liquid throughput is increased. The Orbital 3000 is capable of over 6 g's.

Screen Motion

The Orbital 3000 uses a patented progressive orbital motion. The machine produces narrow ellipses at the feed end with broader ellipses at the discharge.



This orbital motion produces a high rate of conveyance of solids from the feed to the discharge. The result is maximum throughput. Orbital motion also provides improved maximum screen life.

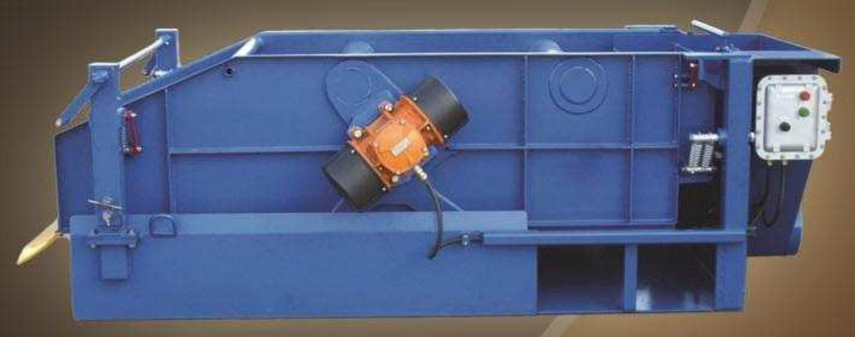
Minimal Screen Cost

With over 500 shakers sold worldwide the Vortex Fluid Systems Orbital 3000 shale shaker has been proven to excel, not only performance, but screen life. The following real life testimonials prove this to be true.

Screen Life Examples

- Justiss Drilling reduced screen costs to 1/8 the original cost by replacing a competitors dual with a VFSI Orbital 3000 Dual.
- Unit Drilling drilled a 10,000 ft Barnett shale well using six 210 mesh frame screens.
- Mountain Drilling drilled Barnett Shale wells for a month using one set (8 screens for a dual) of 210 mesh frame screens.
- Patterson Rig 126 drilled 16,000 ft of hole using one set of DX84 screens. One 9,000 ft well and 7,000 ft of a second well.

VORTEX
FLUID SYSTEMS INC.



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