



**Vortex Fluid Systems Inc.**  
*Serving our Customers Worldwide...*

# ORBITAL MUD CLEANER

*1,000 gallons per minute  
processing capacity*

#### 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.



**Integrity**  
**Reliability**  
**Performance**

Serving Customers Worldwide: [www.vortexfluidsystems.com](http://www.vortexfluidsystems.com)

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## VFSI MUD CLEANER

Vortex Fluid Systems, Inc (VFSI) is committed to building high quality shakers. Precise welding tolerances are maintained, producing one of the most durable and quietest shakers in the industry. With over 500 shakers in the field, VFSI has a field tested design marked by outstanding performance, durability, and unmatched screen life. All this, coupled with competitive pricing makes VFSI shakers unique in the industry.

### Screen Adjustment

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



### Hydrocyclone Insert

The cone section is available with a ceramic insert for increased service life. Each hydrocyclone discharges into a chamber to coalesce droplets, again minimizing overspray.



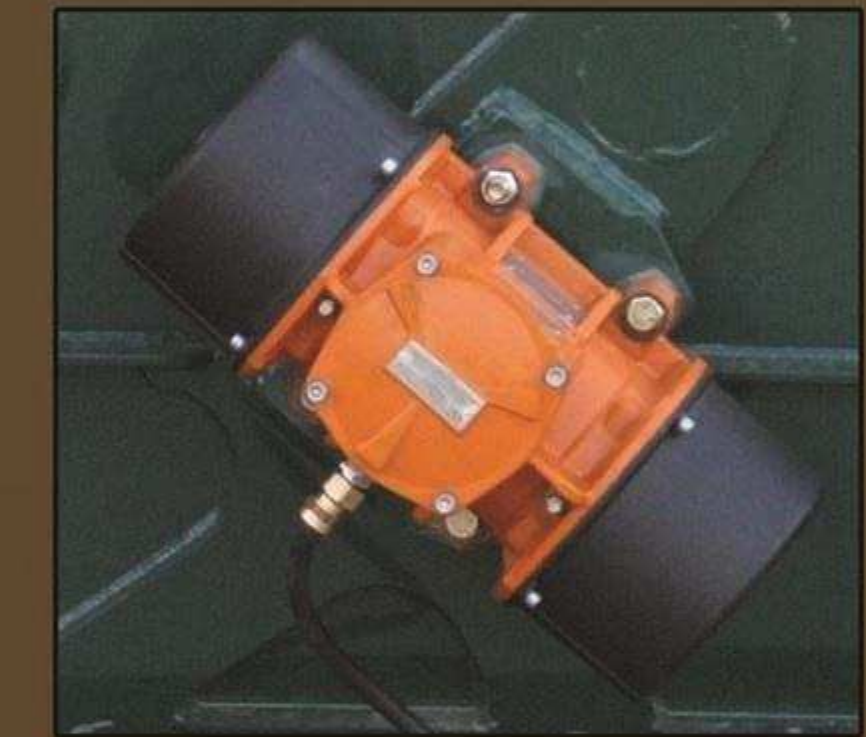
### Hydrocyclone

VFSI uses a long four inch hydrocyclone designed to process 100 gpm. As a result, just ten of these hydrocyclones processes 1000 gpm. Hydrocyclones extend into the basket to minimize overspray.



### Martin/Italvebras Vibrator

Martin/Italvebras 5900 vibrators are exceptionally durable. The Martin vibrators are capable of delivering 6.6 g's of vibration to the VFSI Mud Cleaner. The VFSI mud cleaner and Orbital 3000 use the same vibrators and electrical components.



### Wedge Block

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



### Wedge Block Installation Tool

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



### PERFORMANCE

The VFSI three panel mud cleaner uses orbital motion for extended screen life and conveyance. Ten high performance hydrocyclones process 1000 gpm of mud. The large screen area (22.5 ft<sup>2</sup>) and high "g forces" allow the user to commonly run 250 and 325 mesh screens.

### DURABILITY

All baskets are fully seal welded and stress relieved. Seal welding reduces corrosion, adding years to machine life. The hydrocyclones are available with ceramic inserts for increased service life.

### DIMENSIONS

The VFSI three panel mud cleaner is 7' 6" long and 5' 1" wide at the base. The vibrators extend another seven inches on each side. The 7 1/2 ft length allows the three panel mud cleaner to be mounted on a 10 ft wide pit and still have a walkway.

### 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.



**VORTEX**  
FLUID SYSTEMS INC.

## 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

## MUD CLEANER BENEFITS

- competitively priced
- high performance
- minimal screen cost
- dependable and durable
- low maintenance
- minimal operational costs
- compact footprint
- minimal noise
- simple to adjust screen angle



## 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

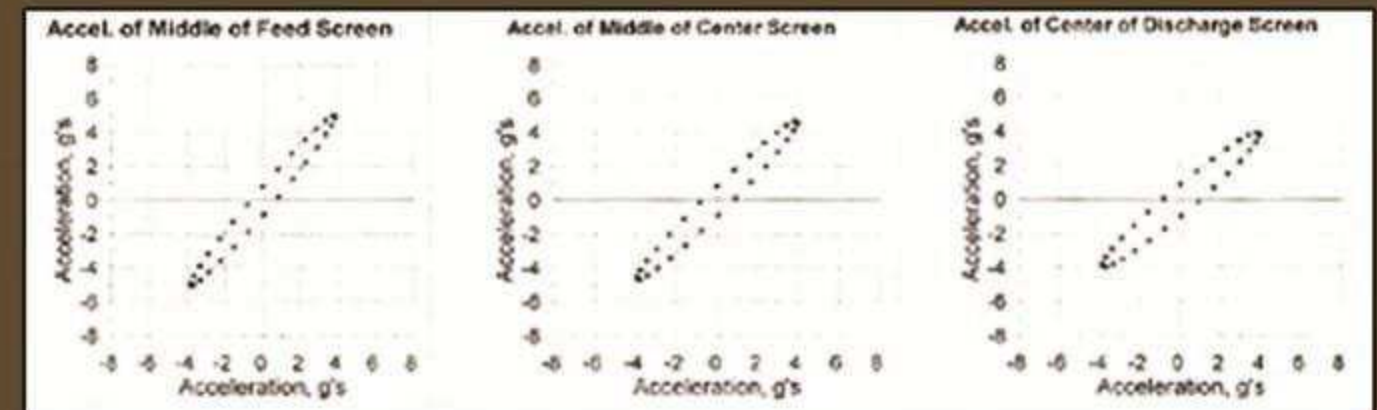
Screen Surface area to a great extent establishes the fluid throughput of the machine. The Orbital 3000 has 30 ft<sup>2</sup> of screening area. This makes the Orbital 3000 among the largest in the drilling industry. At the same time, The footprint of the machine is approximately 10 ft by 5 ft so that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

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