VORTEX
FLUID SYSTEMS INC.

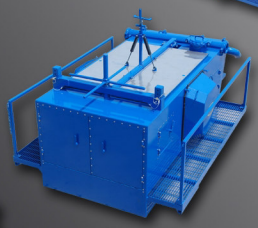
PRODUCTS CATALOGUE 2019

ORBITAL® 3000

ORBITAL® 3000 DUAL

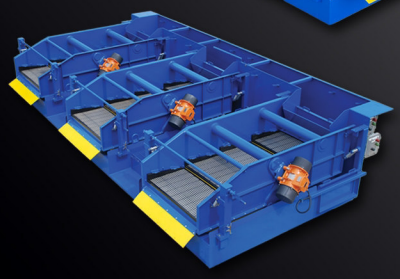
DIAMOND 320 HYDROCYCLONE MANIFOLD

ORBITAL® 3000 DRYING SHAKER WITH WALKWAYS



ORBITAL® 3000 WITH VAPOR RECOVERY

ORBITAL® LINEAR MUD CLEANER



ORBITAL® 3000 TRIPLE

VORTEX SCREENS

Email: info@vortexfluidsystems.com

vortexfluidsystems.com

COMPANY PROFILE

Grant Young is president of Vortex Fluid Systems, Inc. (VFSI) and began VFSI in 1995. In 1998 VFSI began to design and build high-performance equipment for the drilling and mining industry. Prior to this, Grant spent 16 years working for Amoco Research in the area of solids liquid separation and is an expert in vibratory screening technology. Ray Young is Vice President of VFSI and began working for VFSI in 2008. Ray has a masters and undergraduate degree in mechanical engineering, with an emphasis in dynamic modeling and structural design. Wages Forman is COO and began working with VFSI in 2012 and has an undergraduate and master's degree in Industrial Engineering. Today VFSI has an experienced weld team, quality control manager, project manager, and shop superintendent.

FACILITIES

VFSI is proud to produce premium, high performance equipment in the United States of America. Since 1998 VFSI has experienced a steady growth in sales. Between 2010 and 2012 our sales projections showed a need to expand our production facilities. In 2013 we opened our state-of-the-art production facility which is capable of manufacturing 700 shakers a year. Due to careful financial management, VFSI accomplished this expansion debt free. Today VFSI has laid a strong and stable financial foundation for the future.

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 a satisfied customer base, we will continue to accomplish these goals and are excited about what the future holds for our customers.

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

What you can expect…

*When you buy Vortex you get **quality**.*
VFSI is committed to building premium shale shakers and mud cleaners for the oil industry and industrial operations. Since VFSI's founding, our goals have been simple: Serve our customers by creating the best performing and most reliable shakers in the industry.

*When you buy Vortex you get **reliability.***
VFSI has made a name for itself as having the most reliable shakers in the drilling industry. Our attention to detail has yielded a shaker with a bullet-proof design. This translates into minimal maintenance and operating costs for our customers.

*When you buy Vortex you get **performance.***
The VFSI product line has been shown to excel in performance and screen life. With up to 7.5 g's, 30 ft^2 of screening area, and near linear/narrow progressive elliptical motion, the VFSI shaker is one of the best performing shakers in the industry.

*When you buy Vortex you get **responsiveness.***
At VFSI we pride ourselves for having a customer oriented company. Our sales staff are willing to discuss any aspect of the product and willing to work with customers to ensure they get the machinery they need, when they need it.

"We never forget we're working for you."

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Common Shaker Features

SEAL WELDING
All baskets are fully seal welded. 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.

ISOLATION
Stainless steel and powder coated spring isolators provide superior isolation and corrosion resistance. An Orbital® 3000 resting on flat concrete will not "walk".

VIBRATORS
The Italvibras vibrators are exceptionally durable. The Italvibras vibrators are some of the most overbuilt mechanically and electrically in the marketplace.

HIGH PERFORMANCE
The Orbital® 3000 has 6.9 g's standard with a higher G option of 7.5 g's. Combined with near linear/narrow progressive elliptical motion the Orbital® 3000 has one of the highest performance ratings in the industry.

WEDGE BLOCKS
Durable polyurethane wedge blocks hold screens securely in place. The vortex shaker does not 'lose' wedgeblocks while vibrating.

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

TOOL BOX
The Orbital® 3000 comes with a tool box. This box contains equipment for operation and basic maintenance of the Orbital® 3000 shakers and Italvibras vibrators.

QUIET OPERATION
The Orbital® 3000 is exceptionally quiet, due to efficient isolation, linear/narrow progressive elliptical motion and a sturdy base. With the machine running, it is possible to stand a nickel on edge at each corner of the machine.

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ORBITAL® 3000

DESCRIPTION

The Orbital® 3000 shale shaker has proven itself in both the drilling and mining industry. It has a high performance, low maintenance design which incorporates longevity features such as seal welding and a multi-layer premium coating system for corrosion protection. The Orbital® 3000 is considered by many of our customers as one of their best investments on the drilling rig. Couple this with a patent pending screen seal that is as easy to change as a set of screens and it is no wonder the Orbital® 3000 has gained an unparalleled reputation with both rig owners and tool pushers as the best shaker in the oilfield.

PERFORMANCE

The screen area of the 4 panel shaker is 30 ft^2 with an acceleration of 6.9 g's standard and 7.5 g's optional. The combination of screen surface area, high g's, and screen motion make the Orbital® 3000 one of the best performing machines in the industry. Orbital® shakers use near linear/narrow progressive elliptical motion for extended screen life and excellent conveyance.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.9 g's (standard) to 7.5 g's (optional)
- ☑ **SCREEN AREA:** 30 ft of screening area
- ☑ **SCREEN LIFE:** Orbital® shakers have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

SPECIFICATIONS

Dimensions (LxWxH):	126x78x44-3/4in (320x198x44 cm)
Base Dimensions (LxW):	105-1/2x61 in (268x155 cm)
Weight:	3,900 lb (1,769 kg)
Adjustment Angle:	0 to 5 degrees
Screen type:	pretension
Screen number:	4
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

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ORBITAL® 3000 DUAL

DESCRIPTION

The Orbital® 3000 Dual has two Orbital® four panel baskets mounted on a single base. The Orbital® 3000 Dual has a high performance and low maintenance design which incorporates longevity features such as seal welding and multiple layers of corrosion protection. The Orbital® 3000 Dual is considered by many of our customers as one of the best investments on the drilling rig. Couple this with a patent pending screen seal that is as easy to change as a set of screens and it is no wonder the Orbital® 3000 Dual has gained an unparalleled reputation with both rig owners and tool pushers as the best shaker in the oilfield.

PERFORMANCE

The screen area of the Orbital® 3000 Dual is 60 ft^2 with an acceleration of 6.9 g's standard and 7.5 g's optional. The combination of screen surface area, high g's, and screen motion make the Orbital® 3000 Dual one of the best performing machines in the industry. The Orbital® 3000 Dual shaker uses near linear/narrow progressive elliptical motion for extended screen life and excellent conveyance.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.9 g's (standard) to 7.5 g's (optional)
- ☑ **SCREEN AREA:** 30 ft of screening area
- ☑ **SCREEN LIFE:** Orbital® shakers have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

FLUIDS MANAGEMENT

The VFSI Orbital® 3000 Dual shaker is conveniently arranged to simplify drilling fluids/cement bypass management.

NORMAL OPERATIONS

In normal drilling operation the door through the floor pan between the Orbital® 3000 baskets returns flow to the sand trap.

CEMENTING OPERATIONS

Cementing is diverted to bypass the Orbital® 3000 baskets by simply installing the floor pan and two inner shaker doors, removing the two cement bypass doors, and opening the bypass gate discharges cement to the reserve pit.

SPECIFICATIONS

Dimensions (LxWxH):	130x173x50in (330x439x127 cm)
Base Dimensions (LxW):	106x156-5/8 in (269x398 cm)
Weight:	9,500 lb (4,318 kg)
Adjustment Angle:	0 to 8 degrees
Screen type:	pretension
Screen number:	4
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

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ORBITAL® 3000 TRIPLE

DESCRIPTION

The Orbital® 3000 Triple has three Orbital® four panel baskets mounted on a single base. The Orbital® 3000 Triple has a high performance and low maintenance design which incorporates longevity features such as seal welding and multiple layers of corrosion protection. The Orbital® 3000 Triple is considered by many of our customers as one of the best investments on the drilling rig. Couple this with a patent pending screen seal that is as easy to change as a set of screens and it is no wonder the Orbital® 3000 Triple has gained an unparalleled reputation with both rig owners and tool pushers as the best shaker in the oilfield.

PERFORMANCE

The screen area of the Orbital® 3000 Triple is 90 ft^2 with an acceleration of 6.9 g's standard and 7.5 g's optional. The combination of screen surface area, high g's, and screen motion make the Orbital® 3000 Triple one of the best performing machines in the industry. The Orbital® 3000 Triple shaker uses near linear/narrow progressive elliptical motion for extended screen life and excellent conveyance.

Features

Orbital® shakers have many beneficial features.

- ☑ **Acceleration:** 6.9 g's (standard) to 7.5 g's (optional)
- ☑ **Screen Area:** 90 ft^2 of screening area
- ☑ **Screen Life:** Orbital® shakers have exceptional screen life
- ☑ **Seal Welded:** fully seal welded baskets
- ☑ **Low Maintenance:** ultra low maintenance design
- ☑ **Low Noise:** 70 db standing 3 ft from the discharge
- ☑ **Abrasion Protection:** two layers of powder coat
- ☑ **Screen Seals:** patent pending screen seals are as easy to change as a set of screens
- ☑ **Vibrators:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **Manufacturing:** Made in USA

FLUIDS MANAGEMENT

The VFSI Orbital® 3000 Triple shaker is conveniently arranged to simplify drilling fluids/cement bypass management.

NORMAL OPERATION

In normal drilling operation the door through the floor pan between the Orbital® 3000 baskets returns flow to the sand trap.

CEMENTING OPERATION

Cementing is diverted to bypass the Orbital® 3000 baskets by simply installing the floor pan and two inner shaker doors, removing the two cement bypass doors, and opening the bypass gate discharges cement to the reserve pit.

SPECIFICATIONS

Dimensions (LxWxH):	130x269.5x52.5in (330x439x127 cm)
Base Dimensions (LxW):	107x252 in (272x641 cm)
Weight:	12,250 lb (5568 kg)
Adjustment Angle:	0 to 8 degrees
Screen type:	pretension
Screen number:	12
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

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ORBITAL® 3000 CASCADING SHAKER

DESCRIPTION

The Orbital® 3000 cascading shaker has a high performance and low maintenance design. The scalping deck is 18 ft^2 with 30 ft^2 for the primary deck. Other features include, near linear/narrow progressive elliptical motion, 6.75 g's, snap in place screen seals, quick connect shipping straps, stainless splash guard and jack type angle change mechanism.

SCALPING DECK

The scalping deck allows for a coarse solids separation, reducing the solids loading on the primary deck. This improves screen life on the primary deck and allows for dryer solids discharge. The scalping deck also aids in the removal of difficult to convey solids such as gumbo.

PERFORMANCE

The Orbital® 3000 cascading shaker has 48 ft^2 of total screening area with 18 ft^2 on the cascading deck and 30 ft^2 on the primary deck. The motion of the shaker is near linear/narrow progressive elliptical motion at 6.75 g's.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.75 g's
- ☑ **SCREEN AREA:** 48 ft^2 (18 ft^2 cascading, 30 ft^2 primary)
- ☑ **SCREEN LIFE:** Orbital® shaker have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 80 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

SPECIFICATIONS

Dimensions (LxWxH):	129x81x57.25in (327x206x145 cm)
Base Dimensions (LxW):	107.75x61 in (273x155 cm)
Weight:	5250 lb (3270 kg)
Adjustment Angle:	feed and discharge
Screen type:	pretension
Upper Deck Screen Number:	4 screens
Lower Deck Screen Number:	2 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

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ORBITAL® 3000 CONVERSION KIT

DESCRIPTION

The Orbital® 3000 conversion kit fits your existing BRANDT® KING COBRA™ AND KING COBRA VENOM™ shaker bases. The Orbital® 3000 Conversion Kit is a simple drop-in after the removal of the old shaker basket. Installation does not require drilling, cutting or welding.

IMPROVEMENTS

- LOWER OPERATIONAL COSTS
- LONGER BASKET AND VIBRATOR SERVICE LIFE
- LESS MAINTENANCE AND DOWN TIME
- PERFORMANCE/PROCESSING CAPACITY

PERFORMANCE

The screen area of the 4 panel shaker is 30 ft2 with an acceleration of 6.9 g's (standard) to 7.5 g's (optional). The combination of screen surface area, high g's, and near linear/narrow progressive elliptical motion make the Orbital® 3000 one of the best performing machines in the industry.

INSTALLATION

After the old basket is removed the retrofit basket can be mounted on the existing base. Installation of the basket can be quickly accomplished with no drilling, cutting, or welding.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **INSTALLATION:** easy drop-in installation, no drilling, grinding, or cutting
- ☑ **ACCELERATION:** 6.9 g's (standard) to 7.5 g's (optional)
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **LOW MAINTENANCE:** ultra low maintenance
- ☑ **SEAL WELDED:** fully seal welded
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

ORBITAL® 3000 CONVERSION

DUAL ORBITAL® 3000 RETROFIT MOUNTED IN AN EXISTING BASE

SPECIFICATIONS

Dimensions (LxWxH):	107-1/8x78x46-3/8in (272x198x118 cm)
Base Dimensions (LxW):	103-7/8x64 in (264x163 cm)
Weight:	2640 lb (1188 kg)
Adjustment Angle:	feed and discharge
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. Proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

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ORBITAL® 3000 WITH VAPOR RECOVERY (INDUSTRIAL VERSION)

DESCRIPTION

The Orbital® 3000 with Vapor Hood is a four-panel shaker with a vent hood. A vent hood is used to isolate and remove toxic or combustible gas from the flow line. A pipe is connected to the top of the feed section of the shaker allowing for the safe removal of gases.

SHAKER ACCESS DOORS

Access to the basket for screen changes is accomplished by opening conveniently placed doors on both the discharge and top of the shaker. In addition, special doors are made with hand tightened t-bolts for conveniently accessing vibrators. Four smaller doors are provided for accessing the isolator assemblies. All access doors are fitted with seals. These seals make the shaker quiet and reduce gas leakage points.

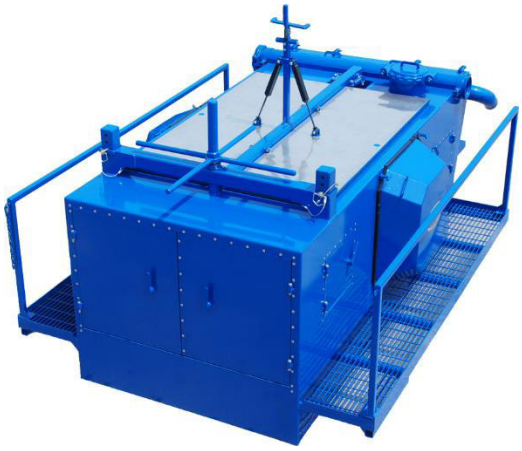
SPRAYER SYSTEM

The industrial shaker is fitted with a spray system that sprays under the screens. This aides in handling diverse solids types and is necessary for removing solids in certain industrial applications.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.9 g's
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **SCREEN LIFE:** Orbital® shaker have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 55 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA



SPECIFICATIONS

Dimensions (LxWxH):	129-1/2x93x74-5/8 in (329x236x74-5/8 cm)
Base Dimensions (LxW):	116-1/4x61 in (295x155 cm)
Weight:	5500 lb (1455 kg)
Adjustment Angle:	feed and discharge
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

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ORBITAL® 3000 DRYING SHAKER WITH WALKWAYS

DESCRIPTION

The Orbital® 3000 Drying Shaker with walkways is a four panel shaker with an extended feed section, mounted on an open frame base with personnel walkways.

BENEFITS IN PROCESSING CUTTINGS

One advantage of the VFSI drying shaker is in processing cuttings. Competitor units have stationary sections which funnel cuttings to the shaker. These areas commonly plug up, must be cleared, and can cause a mess. The VFSI Orbital® 3000 Drying shaker features an extended section and cuttings are vibrated onto the screen eliminating cuttings backup.

GRATED WALKWAYS

The grated walkways on each side of the unit keep the operator "out of the mud" and provide a convenient height to change screens and monitor performance.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6-6.9 g's
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **SCREEN LIFE:** Orbital® shakers have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

SPECIFICATIONS

Dimensions (LxWxH):	116x100.5x40.5in (295x255x102 cm)
Base Dimensions (LxW):	101x68.5 in (256x174 cm)
Weight:	3200 lb (1455 kg)
Adjustment Angle:	feed and discharge
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

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ORBITAL® 3000 DRYING SHAKER WITH TEN BARREL SUMP

DESCRIPTION

The Orbital® 3000 Drying Shaker with Ten Barrel Sump is a four panel shaker with extended feed section, mounted on a "v-bottom" ten barrel sump, with personnel walkways.

BENEFITS IN PROCESSING CUTTINGS

One advantage of the VFSI drying shaker is in processing cuttings. Competitor units have stationary sections which funnel cuttings to the shaker. These areas commonly plug up, must be cleared, and can cause a mess. The VFSI Orbital® 3000 Drying shaker features an extended section and cuttings are vibrated onto the screen eliminating cuttings backup.

GRATED WALKWAYS

The grated walkways on each side of the unit keep the operator "out of the mud" and provide a convenient height to change screens and monitor performance.

TEN BARREL SUMP

Ten barrel sump reduces reservoir pump cycles.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6-6.9 g's
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **SCREEN LIFE:** Orbital® shaker have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

SPECIFICATIONS

Dimensions (LxWxH):	116x92.75x59in (295x236x150 cm)
Base Dimensions (LxW):	96.5x61 in (245x154 cm)
Weight:	4200 lb (1910 kg)
Adjustment Angle:	feed and discharge
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

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ORBITAL® 3000 DRYING SHAKER OPEN FRAME BASE

DESCRIPTION

The Orbital® 3000 Drying Shaker is a four panel shaker with an extended feed section, mounted on an open frame base. It has a high performance, low maintenance design which incorporates longevity features such as seal welding and a multi-layer premium coating system for corrosion protection. The Orbital® 3000 Drying Shaker is considered by many of our customers as one of their best investments on the drilling rig. Couple this with a patent pending screen seal that is as easy to change as a set of screens and it is no wonder the Orbital® 3000 Drying Shaker has gained an unparalleled reputation with both rig owners and tool pushers as the best shaker in the oilfield.

BENEFITS IN PROCESSING CUTTINGS

One advantage of the VFSI drying shaker is in processing cuttings. Competitor units have stationary sections which funnel cuttings to the shaker. These areas commonly plug up, must be cleared, and can cause a mess. The VFSI Orbital® 3000 Drying shaker features an extended section and cuttings are vibrated onto the screen eliminating cuttings backup.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6-6.9 g's
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **SCREEN LIFE:** Orbital® shakers have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

SPECIFICATIONS

Dimensions (LxWxH):	116x81.5x40.5in (295x207x102 cm)
Base Dimensions (LxW):	100.75x65.25 in (256x166 cm)
Weight:	2900 lb (1318 kg)
Adjustment Angle:	feed and discharge
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

ORBITAL® 3750 DRYING SHAKER OPEN FRAME BASE

DESCRIPTION

The Orbital® 3750 Drying Shaker is a five panel shaker with an extended feed section with multiple base options available, with walkways and without. The Orbital 3750 Drying Shaker has a high performance, low maintenance design which incorporates durability features such as seal welding and a multi-layer premium coating system for corrosion protection. The Orbital® 3750 Drying Shaker is considered by many of our customers as one of their best investments on the drilling rig.

5 PANEL BENEFITS

The Orbital® 3750 Drying Shaker uses 5 screens instead of the standard 4. This configuration increases the amount of drying time for the mud by 25%. Drying time is particularly useful while using finer screens. Finer screens reduce solids loading on the centrifuge, thereby improving centrifuge performance and reducing wear.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.75 g's
- ☑ **SCREEN AREA:** 37.5 ft^2 of screening area
- ☑ **SCREEN LIFE:** Orbital® shakers have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

DRYING SHAKER BENEFITS

One advantage of the VFSI drying shaker is in processing cuttings. Competitor units have stationary sections which funnel cuttings to the shaker. These areas commonly plug up, must be cleared, and can cause a mess. The VFSI Orbital® 3750 Drying shaker features an extended section and cuttings are vibrated onto the screen eliminating cuttings backup.

SPECIFICATIONS

Dimensions (LxWxH):	141x81x45.5in (359x207x115 cm)
Base Dimensions (LxW):	125.5x65.25 in (319x166 cm)
Weight:	3400 lb (1545 kg)
Adjustment Angle:	feed and discharge
Screen type:	pretension
Screen number:	5 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

ORBITAL® 3000 HORIZONTAL BORING

DESCRIPTION

The Orbital® 3000 Horizontal Boring is a four panel shaker with an extended feed section, mounted on an open frame base. It has a high performance, low maintenance design which incorporates longevity features such as seal welding and a multi-layer premium coating system for corrosion protection.

THE "DIRTY SECRET" (SOLIDS BYPASS)

The "dirty secret" of shakers is that many shakers bypass solids around the screen into the tankage due to improper sealing of screens and poor basket design. Because horizontal boring applications have high solids content this problem is made even worse. Vortex shakers do not have this problem. Our customers report extremely low solids bypassing the screen. This is a result of well designed and manufactured seals and proper screen tensioning.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6-6.9 g's (7.5 g's optional)
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **SCREEN LIFE:** Orbital® shakers have exceptional screen life
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

CUTTINGS PROCESSING BENEFITS

Horizontal boring applications require shakers capable of handling high solids laden fluids. The VFSI Orbital® 3000 Horizontal Boring shaker has exceptionally good solids conveyance. As a result, solids do not pile up on the shaker. This greatly improves fluid handling capacity and screen life.

SPECIFICATIONS

Dimensions (LxWxH):	101.5x80.5x44.5in (258x204x113.2 cm)
Base Dimensions (LxW):	97.5x59.5 in (247x151 cm)
Weight:	2700 lb (1230 kg)
Adjustment Angle:	feed and discharge
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

INDUSTRIAL SHAKERS

INDUSTRIAL SHAKERS

VFSI offers a wide range of custom shakers for different industrial applications. Industrial shakers have many different types of solids, percent solids loading, fluid types, flow rates, and environments. Our industrial shakers are designed with these parameters to maximize fluid throughput and cuttings dryness. If you have a specific application in mind, give us a call.

CUSTOM SHAKERS

At Vortex we have three engineers on staff with over 75 years' experience. Most shaker companies are unwilling to build custom machinery to meet a specific customer's specifications. At Vortex we can customize your shaker to your specific needs. This alleviates frustration, down time, and helps to smoothly integrate our shakers into an existing facility or operation. If there is a specific structural or design requirement that must be met we can incorporate that into the shaker before fabrication. If you have a specific shaker in mind, give us a call.

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

ORBITAL® 3 PANEL MUD CLEANER

DESCRIPTION

The Orbital® 3 Panel Mud Cleaner features a very compact design capable of processing 1000 GPM of drilling mud. This mud cleaner has 22.5 ft^2 of screening area and produces 6.6 g's to 7.5 g's of acceleration. The hydrocyclone manifold has ten high performance 4 inch cones each capable of processing 100 gpm each.

HYDROCYCLONE MANIFOLD

The hydrocyclone manifold has ten premium four inch hydrocyclones in a linear configuration with a total processing capacity of 1000 GPM. Each hydrocyclone is capable of processing 100 GPM and comes with a head, cylindrical, and cone sections. The tip of the cone section has a polyurethane nut and adjustable nozzle wear piece. The feed and overflow for the manifold are 6 in [15.25 cm] diameter. Holes for optional pressure gages are mounted on the feed tube. See page 17 for more information on the hydrocyclone manifold.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.6 g's (7.5 g's optional)
- ☑ **SCREEN AREA:** 22.5 ft^2 of screening area
- ☑ **COMPACT UNIT:** low height, small footprint
- ☑ **PROCESSING CAPACITY:** 1000 gpm
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA

HYDROCYCLONE ACCESS

The Orbital® 3 Panel Mud Cleaner has the hydrocyclones mounted above the steel plate in front of the first screen. This configuration greatly reduces the overall height of the shaker while allowing room to conveniently access the hydrocyclones.

SPECIFICATIONS

Dimensions (LxWxH):	99x77.5x75in (251x197x191 cm)
Base Dimensions (LxW):	83.5x61.25 in (212x156 cm)
Weight:	3980 lb (1800 kg)
Adjustment Angle:	0 to 5 deg
Screen type:	pretension
Screen number:	3 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

ORBITAL® 3000 WITH LINEAR 2500 MANIFOLD

DESCRIPTION

The Orbital® 3000 Mud Cleaner with linear hydrocyclone manifold has 30 ft^2 of screening area and produces 6.9 g's (7.5 g's optional) of acceleration. The ten desilter cones processes 1000 gpm and the two or three desander cones processes 1000 or 1500 gpm.

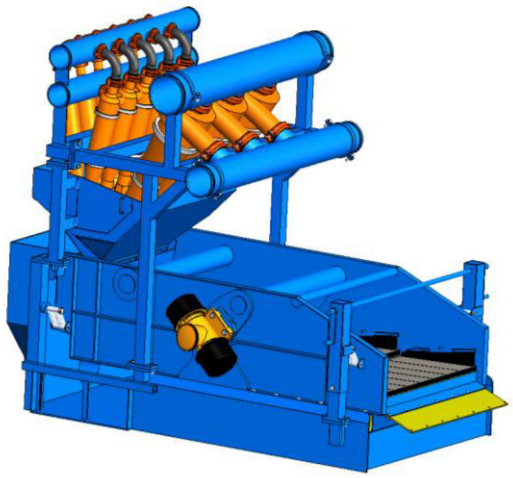
HYDROCYCLONE MANIFOLD

The hydrocyclone manifold has ten premium four inch hydrocyclones capable of processing 100 GPM each for a total processing capacity of 1000 GPM. The manifold also has two or three desander cones capable of processing 500 GPM for each cone. The tip of both the desander and desilter cones have a polyurethane nut and adjustable nozzle wear piece. The feed and overflow for the four inch manifold are 6 in [15.25 cm] diameter. The feed and overflow for the desander cones are 8 and 10 inches respectively.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.9 g's (7.5 g's optional)
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **COMPACT UNIT:** low height, small footprint
- ☑ **PROCESSING CAPACITY:** 1000 gpm desilter capacity, 1000 to 1500 gpm desander capacity
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA



HYDROCYCLONE ACCESS

The manifold pan has the hydrocyclones mounted above the steel plate in front of the first screen. This configuration greatly reduces the overall height of the shaker while allowing room to conveniently access the hydrocyclones. Since the hydrocyclones discharge on a steel plate, and not on the screen directly, screen life is greatly improved.

SPECIFICATIONS

Dimensions (LxWxH):	126x78x75in (251x198x191 cm)
Base Dimensions (LxW):	83.5x61.25 in (212x156 cm)
Weight:	5000 lb (2270 kg)
Adjustment Angle:	0 to 5 deg
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

ORBITAL® 3000 WITH DIAMOND 320 OR 216 MANIFOLD

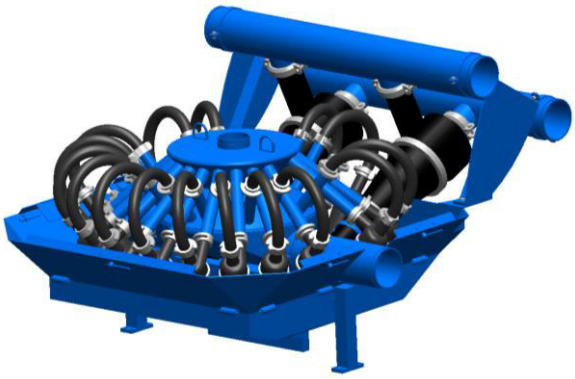
DESCRIPTION

The Diamond 320 hydrocyclone manifold is a circular manifold with 3 desander cones and 20 desilter cones. It has 1000 GPM desilter and 1500 GPM desander capacities. The Diamond 216 manifold has two desander cones with 16 desilter cones. It has 800 GPM desilter and 1000 GPM desander capacity respectively. The Diamond 320 and 216 manifolds are compatible with the Orbital® 3000, Dual, and Triple flowline shakers.

Diamond 320 (3 desanders, 20 desilters)

DIAMOND 320

The Diamond 320 hydrocyclone manifold is a circular manifold with three desander cones that can process 500 GPM each and twenty desilter cones that can process 50 GPM. For more information on the Diamond 320 manifold see page 22 of this manual.



Diamond 216 (2 desanders, 16 desilters)

DIAMOND 216

The Diamond 216 hydrocyclone manifold is a circular manifold with two desander cones that can process 500 GPM each and sixteen desilter cones that can process 50 GPM. For more information on the Diamond 320 manifold see page 23 of this manual.

SMALL FOOTPRINT

The circular manifold orients the four inch cones toward the discharge of the hydrocyclone pan. This configuration minimizes space giving all the Diamond manifolds a compact footprint. It also allows the feed tube to both the desander and desilter cones to be mounted lower which reduces required pump pressure.

SCREEN ACCESS

One of the most important features of the Diamond manifold is access to the screen deck. The Diamond manifold allows a large amount of room for changing screens.

HYDROCYCLONE ACCESS

The pan has five doors for convenient access to the hydrocyclones. The doors use a spring loaded handle and require no tools to open or close.

FLOW

The manifold pan discharges solids on a plate attached to the possumbelly. The flow is then directed towards the plate at the feed of the basket. This prevents solids from falling directly on the feed screen, greatly reducing wear on this screen.

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

ORBITAL® 3000 HORIZONTAL BORING MUD CLEANER

DESCRIPTION

The Orbital® 3000 Mud Cleaner with linear hydrocyclone manifold offers 1000 gpm processing capacity. With 30 ft^2 of screening area, this mud-cleaner offers a large screen area with a very small footprint.

HYDROCYCLONE MANIFOLD

The hydrocyclone manifold has ten premium four inch hydrocyclones in a linear configuration with a total processing capacity of 1000 GPM at 32 psi. The hydrocyclones discharge on a metal plate greatly reducing wear on the first screen. The cone section has a polyurethane nut and adjustable nozzle wear piece. An underflow orifice is attached to the nut to minimize spray.

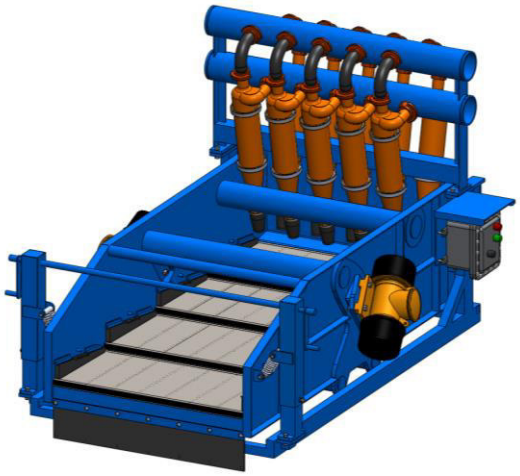
THE "DIRTY SECRET" (SOLIDS BYPASS)

The "dirty secret" of shakers is that many shakers bypass solids around the screen into the tankage due to improper sealing of screens and poor basket design. Because horizontal boring applications have high solids content this problem is made even worse. Due to well-designed seals and proper tensioning of screens the Orbital® shakers have extremely low solids bypass.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.9 g's (7.5 g's optional)
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **COMPACT UNIT:** low height, small footprint
- ☑ **PROCESSING CAPACITY:** 1000 gpm
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry
- ☑ **MANUFACTURING:** Made in USA



HYDROCYCLONE ACCESS

The manifold pan has the hydrocyclones mounted above the steel plate in front of the first screen. This configuration greatly reduces the overall height of the shaker while allowing room to conveniently access the hydrocyclones. Since the hydrocyclones discharge on a steel plate, and not on the screen directly, screen life is greatly improved.

SPECIFICATIONS

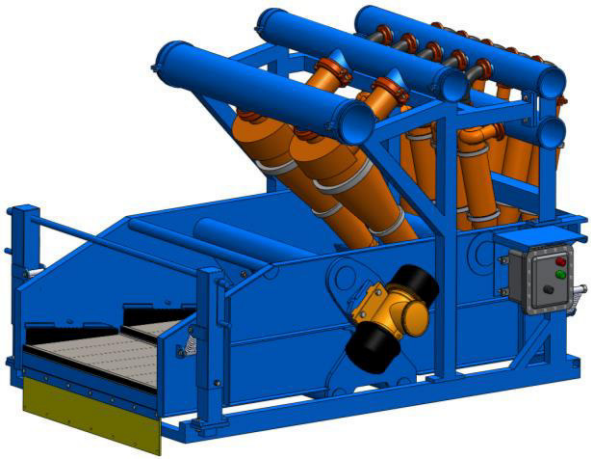
Dimensions (LxWxH):	101.5x80.5x44.5in (258x204x113.2 cm)
Base Dimensions (LxW):	97.5x59.5 in (247x151 cm)
Weight:	3200 lb (2270 kg)
Adjustment Angle:	0 to 5 degrees
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

ORBITAL® 3000 HORIZONTAL BORING MUD CLEANER WITH DESANDER CONES

DESCRIPTION

The Orbital® 3000 Mud Cleaner with linear hydrocyclone manifold offers 1000 gpm desilter and another 1000 gpm desander processing capacity. With 30 ft^2 of screening area, this mud-cleaner offers a large screen area with a very small footprint.



HYDROCYCLONE MANIFOLD

The hydrocyclone manifold has ten premium four inch hydrocyclones that process 100 gpm each and two desander cones that process 500 GPM each. The hydrocyclones discharge on a metal plate to greatly reducing wear on the first screen. The cone section of both the desilter and desander cones have a polyurethane nut and adjustable nozzle wear piece. An underflow orifice is attached to the desilter cone to minimize spray.

THE "DIRTY SECRET" (SOLIDS BYPASS)

The "dirty secret" of shakers is that many shakers bypass solids around the screen into the tankage due to improper sealing of screens and poor basket design. Because horizontal boring applications have high solids content this problem is made even worse. Due to well-designed seals and proper tensioning of screens the Orbital® shakers have extremely low solids bypass.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **ACCELERATION:** 6.9 g's (7.5 g's optional)
- ☑ **SCREEN AREA:** 30 ft^2 of screening area
- ☑ **PROCESSING CAPACITY:** 1000 gpm desilter, 1000 gpm desander
- ☑ **SEAL WELDED:** fully seal welded baskets
- ☑ **LOW MAINTENANCE:** ultra low maintenance design
- ☑ **LOW NOISE:** 70 db standing 3 ft from the discharge
- ☑ **ABRASION PROTECTION:** two layers of powder coat
- ☑ **SCREEN SEALS:** patent pending screen seals are as easy to change as a set of screens
- ☑ **VIBRATORS:** vibrators are one of the most overbuilt electrically and mechanically in the industry

HYDROCYCLONE ACCESS

The manifold pan has the hydrocyclones mounted above the steel plate in front of the first screen. This configuration greatly reduces the overall height of the shaker while allowing room to conveniently access the hydrocyclones. Since the hydrocyclones discharge on a steel plate, and not on the screen directly, screen life is greatly improved.

SPECIFICATIONS

Dimensions (LxWxH):	101.5x80.5x68.25in (258x204x173 cm)
Base Dimensions (LxW):	97.5x59.5 in (247x151 cm)
Weight:	3200 lb (2270 kg)
Adjustment Angle:	0 to 5 degrees
Screen type:	pretension
Screen number:	4 screens
Motor rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof
Elect. box rating:	UL Class 1, Div 1, ATEX/IECEx, exp. proof

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

1000 GPM 10 CONE LINEAR MANIFOLD

DESCRIPTION

The hydrocyclone package shown in this specification sheet has ten premium four inch hydrocyclones in a linear configuration with a total processing capacity of 1000 GPM. Each hydrocyclone is capable of processing 100 GPM and comes with a head, straight cylindrical, and a cone section. The tip of the cone section has a polyurethane nut and adjustable nozzle wear piece. The feed and overflow for the manifold has a 6 in [15.25 cm] diameter. All fasteners are stainless steel. Holes for optional pressure gauges are mounted on the top.

DISCHARGE PAN

The discharge pan is deep enough to catch spray for clean operation and wide enough to allow easy access to the polyurethane nut adjustment. The discharge pan has a sloped bottom to eliminate solids buildup, and discharges to a 6 in [15.25 cm] diameter discharge.

MOUNTING OPTIONS

The 10 cone linear manifold can be mounted on a Orbital® 3 Panel mud cleaner, four panel mud cleaner, horizontal boring shaker as well as the standard, dual, triple flow line shakers. The 10 cone manifold can be sold with or without a pan. A simple stand is also available without a pan.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **PROCESSING CAPACITY:** 1000 gpm
- ☑ **POLYURETHANE:** low wear proprietary blend
- ☑ **FASTENERS:** stainless steel
- ☑ **CONE NOZZLE DIAMETER:** adjustable
- ☑ **U-JOINT:** polyeurethane replaceable
- ☑ **SLOPED PAN:** eliminates solids buildup
- ☑ **WIDE PAN:** allows access to hydrocyclones
- ☑ **MANUFACTURING:** Made in USA

HYDROCYCLONE MATERIAL

The polyurethane used to cast the hydrocyclones has shown in testing to significantly exceed 90% alumina ceramic in abrasion wear resistance. Since these cones have better wear properties than our ceramic lined cones, Vortex no longer produces cones with ceramic inserts.

SPECIFICICATIONS

Dimensions (LxWxH):	65.75x28.5x63.5in (167x72x161 cm)
Weight:	980 lb (445 kg)
Cone Type:	100 gpm 4 inch cones
Cone Number:	10 cones
Pan Type:	v-bottom and sloped

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

DIAMOND 320 MANIFOLD (2500 GPM)

DESCRIPTION

The Diamond 320 hydrocyclone manifold is a circular manifold with three desander cones that can process 500 GPM each and twenty desilter cones that can process 50 GPM. The total processing capacity of the Diamond 320 manifold is 1800 GPM.

SMALL FOOTPRINT

The circular manifold orients the four inch cones toward the discharge of the hydrocyclone pan. This configuration minimizes space giving all the Diamond manifolds a compact footprint. It also allows the feed tube to both the desander and desilter cones to be mounted lower which reduces required pump pressure.

DISCHARGE PAN

The discharge pan is deep enough to catch spray for clean operation and wide enough to allow easy access to the polyurethane nut adjustment. The discharge pan has a sloped bottom to eliminate solids buildup, and discharges to a 6 in [15.25 cm] diameter discharge.

FLOW

The manifold pan discharges solids on a plate attached to the possumbelly. The flow is then directed towards the plate at the feed of the basket. This prevents solids from falling directly on the feed screen, greatly reducing wear on this screen.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **Processing Capacity:** 1000 gpm desilter, 1500 gpm desander
- ☑ **Polyurethane:** low wear proprietary blend
- ☑ **Cone Nozzle Diameter:** adjustable
- ☑ **Fasteners:** stainless steel
- ☑ **U-Joint:** polyeurithane replaceable
- ☑ **Sloped Pan:** eliminates solids buildup
- ☑ **Pan Doors:** allows access to hydrocyclones

MOUNTING OPTIONS

The 10 cone linear manifold can be mounted on a Orbital® 3 Panel mud cleaner, four panel mud cleaner, horizontal boring shaker as well as the standard, dual, triple flow line shakers.

SCREEN ACCESS

One of the most important features of the Diamond manifold is access to the screen deck. The Diamond manifold allows a large amount of room for changing screens.

HYDROCYCLONE ACCESS

The pan has five doors for convenient access to the hydrocyclones. The doors use a spring loaded handle and require no tools to open or close.

SPECIFICATIONS

Dimensions (LxWxH):	65.75x28.5x63.5in (167x72x161 cm)
Weight:	3000 lb (1364 kg)
Cone Type:	100 gpm 4 inch cones 500 gpm 10 inch cones
Cone Number:	20 qty, 4 inch cones 3 qty, 10 inch cones
Pan Type:	v-bottom and sloped

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

DIAMOND 216 MANIFOLD (1800 GPM)

DESCRIPTION

The Diamond 216 hydrocyclone manifold is a circular manifold with three desander cones that can process 500 GPM each and twenty desilter cones that can process 50 GPM. The total processing capacity of the Diamond 216 manifold is 1800 GPM.

SMALL FOOTPRINT

The circular manifold orients the four inch cones toward the discharge of the hydrocyclone pan. This configuration minimizes space giving all the Diamond manifolds a compact footprint. It also allows the feed tube to both the desander and desilter cones to be mounted lower which reduces required pump pressure.

DISCHARGE PAN

The discharge pan is deep enough to catch spray for clean operation and wide enough to allow easy access to the polyurethane nut adjustment.

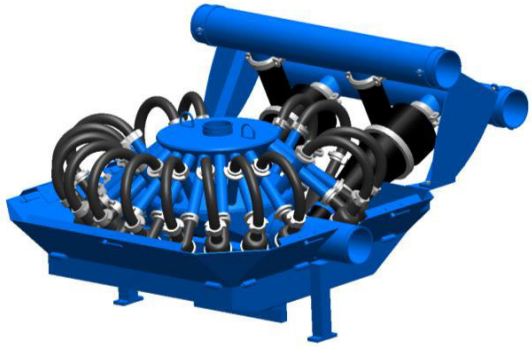
FLOW

The manifold pan discharges solids on a plate attached to the possumbelly. The flow is then directed towards the plate at the feed of the basket. This prevents solids from falling directly on the feed screen, greatly reducing wear on this screen.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **Processing Capacity:** 800 gpm desilter, 1000 gpm desander
- ☑ **Polyurethane:** low wear proprietary blend
- ☑ **Cone Nozzle Diameter:** adjustable
- ☑ **Fasteners:** stainless steel
- ☑ **U-Joint:** polyeurethane replaceable
- ☑ **Sloped Pan:** eliminates solids buildup
- ☑ **Pan Doors:** allows access to hydrocyclones



MOUNTING POTIONS

The 10 cone linear manifold can be mounted on a Orbital® 3 Panel mud cleaner, four panel mud cleaner, horizontal boring shaker as well as the standard, dual, triple flow line shakers.

SCREEN ACCESS

One of the most important features of the Diamond manifold is access to the screen deck. The Diamond manifold allows a large amount of room for changing screens.

HYDROCYCLONE ACCESS

The pan has five doors for convenient access to the hydrocyclones. The doors use a spring loaded handle and require no tools to open or close.

SPECIFICATIONS

Dimensions (LxWxH):	65.75x28.5x63.5in (167x72x161 cm)
Weight:	2700 lb (1227 kg)
Cone Type:	100 gpm 4 inch cones 500 gpm 10 inch cones
Cone Number:	20 qty, 4 inch cones 3 qty, 10 inch cones
Pan Type:	v-bottom and sloped

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

LINEAR 310 MANIFOLD (2500 GPM)

DESCRIPTION

The Linear 310 hydrocyclone manifold is a linear ten cone manifold with three desander cones (2 cones optional) that can process 500 GPM each and ten desilter cones that can process 100 GPM. The total processing capacity of the Linear 310 manifold is 1000 gpm desilter and 1000 or 1500 gpm desander.

DISCHARGE PAN

The discharge pan is deep enough to catch spray for clean operation and wide enough to allow easy access to the polyurethane nut adjustment.

FLOW

The manifold pan discharges solids on a plate attached to the possumbelly. The flow is then directed towards the plate at the feed of the basket. This prevents solids from falling directly on the feed screen, greatly reducing wear on this screen.

MOUNTING OPTIONS

The Linear 310 manifold can be mounted on a Orbital® 3 Panel mud cleaner, four panel mud cleaner, horizontal boring shaker as well as the standard, dual, triple flow line shakers.

FEATURES

The Linear 310 manifold has many beneficial features.

- ☑ **Processing Capacity:** 1000 gpm desilter, 1000 or 1500 gpm desander
- ☑ **Polyurethane:** low wear proprietary blend
- ☑ **Cone Nozzle Diameter:** adjustable
- ☑ **Fasteners:** stainless steel
- ☑ **U-Joint:** polyeurethane replaceable
- ☑ **Sloped Pan:** eliminates solids buildup
- ☑ **Pan Doors:** allows access to hydrocyclones

SCREEN ACCESS

One of the most important features of the linear manifold is access to the screen deck. The linear manifold allows a large amount of room for changing screens.

HYDROCYCLONE ACCESS

The pan has two doors for convenient access to the hydrocyclones. The doors use a spring loaded handle and require no tools to open or close.

SPECIFICATIONS

Dimensions (LxWxH):	65.75x28.5x63.5in (167x72x161 cm)
Weight:	1500 lb (682 kg)
Cone Type:	100 gpm 4 inch cones 500 gpm 10 inch cones
Cone Number:	10 qty, 4 inch cones 3 qty, 10 inch cones
Pan Type:	v-bottom and sloped

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

DIAMOND 20 MANIFOLD WITH DIAMOND PAN

DESCRIPTION

The hydrocyclone package shown in this specification sheet has 20 hydrocyclones in a circular configuration with a total processing capacity of 1000 GPM. This Manifold is available with either a 4 or 3 inch cone. (3 inch cones are shown) Each hydrocyclone is capable of processing 50 GPM. The tip of the four inch cone section has a polyurethane nut and adjustable nozzle wear piece.

DISCHARGE PAN

The discharge pan is deep enough to catch spray for clean operation and wide enough to allow easy access to the polyurethane nut adjustment. The discharge pan has a sloped bottom on all sides to eliminate solids buildup, and discharges to a 6 in [15.25 cm] diameter discharge.

MOUNTING OPTIONS

The 20 cone Diamond manifold can be mounted on a Orbital® 3 Panel mud cleaner, four panel mud cleaner, horizontal boring shaker as well as the standard, dual, triple flow line shakers, with a different pan. The 20 Diamond manifold can be sold with or without a pan. A simple stand is also available without a pan.

FEATURES

Orbital® shakers have many beneficial features.

- ☑ **PROCESSING CAPACITY:** 1000 gpm
- ☑ **POLYURETHANE:** low wear proprietary blend
- ☑ **FASTENERS:** stainless steel
- ☑ **CONE NOZZLE DIAMETER:** adjustable
- ☑ **U-JOINT:** polyeurethane replaceable
- ☑ **SLOPED PAN:** eliminates solids buildup
- ☑ **WIDE PAN:** allows access to cones
- ☑ **MANUFACTURING:** Made in USA

HYDROCYCLONE MATERIAL

The polyurethane used to cast these hydrocyclones has shown in testing to significantly exceed 90% alumina ceramic in abrasion wear resistance. Since these cones have better wear properties than our ceramic lined cones, Vortex no longer produces cones with ceramic inserts.

SPECIFICATIONS

Dimensions (LxWxH):	65.75x28.5x63.5in (167x72x161 cm)
Weight:	980 lb (445 kg)
Cone Type:	50 gpm 4 inch cones
Cone Number:	20 cones
Pan Type:	sloped

Email: info@vortexfluidsystems.com Telephone: 918.810.7798

SPLASH GUARD

DESCRIPTION

The splash guard reduces shaker splash helping keep rigs safe. It is constructed out of heavy duty stainless steel. A spring assist mechanism allows for easy opening. Large splash doors offer exceptional visibility and access to the screen deck. The splash guard also incorporates safety features such as dampeners, dual magnetic and mechanical latches. In addition, the splash guard follows the deck angle for optimal splash prevention.

SPLASH GUARD CLOSED

COMPATIBLE

The splash guard is compatible with Orbital® 3000, Orbital® 3000 Dual and Orbital® 3000 Triple

FEATURES

- Fabricated with stainless steel
- Splash guard changes angle with the basket
- Uses spring, dampers, magnet, and latch for safety
- Excellent basket visibility and screen access

SPLASH GUARD OPEN

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WHEEL ANGLE CHANGE MECHANISM

DESCRIPTION

Vortex shakers have can be produced with two types of angle change mechanisms.

WHEEL ANGLE CHANGE MECHANISM

The wheel type angle change mechanism has a durable steel wheel mounted in the center of the discharge. A stainless steel ACMI threaded rod is used with bearings. The angle can be read on two stainless tubes on either side of the shaker.

JACK ANGLE CHANGE MECHANISM

The jack angle change mechanism uses two jacks on each side of the shaker. The basket angle can be adjusted from either side using a crank handle on the side of the jack.

WHEAL ANGLE CHANGE MECHANISM

JACK ANGLE CHANGE MECHANISM

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PATENTED: QUICK RELEASE SHIPPING STRAP

DESCRIPTION

Vortex Fluid Systems shakers have a unique shipping strap for quickly fastening basket for ease of transport. This design is fast, easy, and requires no tools. The pictures below show the shipping strap in use.

BENEFITS

- Makes Shipping Prep Easy
- No tools necessary
- Stainless T-handle
- Polyurethane Nut and Strap Limits Corrosion

READY FOR SHIPPING

READY FOR DILLING

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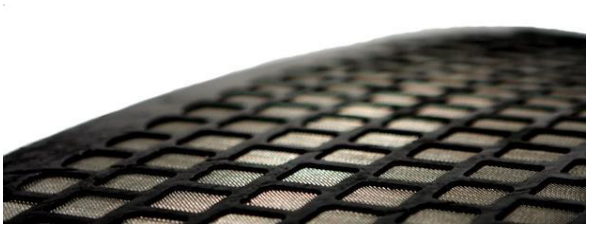
VFSI SCREENS

DESCRIPTION

Vortex Fluid Systems offers screens for all our Orbital® shaker machinery. To better serve our customers we keep a large inventory of, 50, 84, 110, 140, 175 and 210 mesh screens. Other meshes are also available.



SCREEN CONSTRUCTION

To get the best screen life, a screen needs to be constructed properly from the best materials. Our screens use the most durable mesh along with the highest grade steel frames. The screen cloth is not the only important factor for screen life, the adhesion process is what gives our screens their exceptional durability.

SCREEN SELECTION DATA

The following two tables are given to help in screen selection. The first table shows API range and cut points for VFX Layered Oblong mesh of various sizes. The second chart shows the API micron range for the less used layered square mesh.

OBLONG SCREEN DESIGNATION VS MICRON

Current Screen Designation Oblong Mesh	API RP 13C Designation	Measured cut point	API Micron Range For Screen Designation
CRX 84,	API 60 MESH	233	231-275
CRX 110,	API 70 MESH	199	196-231
CRX 140,	API 80 MESH	166	165-196
CRX 210,	API 120 MESH	131	116.5-137.5
CRX 250,	API 140 MESH	101	98-116.5
CRX 270,	API 170 MESH	Pend	82.5-98
CRX 325,	API 200 MESH	Pend	69-82.5

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.

SCREEN DESIGNATION VS MICRON

Current Screen Designation	API RP 13C Designation	API Micron Range for Screen Designation
CWC UF 24	API-20	780 – 925
CWC UF 30	API -25	655 – 780
CWC UF 38	API-35	462.5 – 550
CWC UF 50	API-45	327.5 – 390
CWC UF 70	API-60	231 – 275
CWC UF 84	API-70	196 – 231
CWC UF 110	API-80	165 -196, 195
CWC UF 140	API-100	137.5 – 165
CWC UF 175	API-140	98-116.5
CWC UF 210	API-140	98 - 116.5
CWC UF 250	API-200	69 - 82.5
CWC UF 270	API-200	69 - 82.5,
CWC UF 325	API-230	58 – 69
CWC UF 400	API-325	41.5 – 49

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VFSI SCREENS

DESCRIPTION

To better serve our customers we keep a large inventory screens and can usually ship the day of order. The following table contains part numbers for the most common screens we ship. Other meshes are also available.

PART NUMBERS FOR SCREENS

Part Number	Current Screen Designation	API RP 13C Mesh Designation	Measured cut point (Microns)	API Micron Range For Screen Designation
SV_038	UF 38, SQUARE	API 35	521	462.5-550
SV_050	UF 50, SQUARE	API 45	373	327.5-390
SV_084	CRX™ 84, OBLONG	API 60	233	231-275
SV_110	CRX™ 110, OBLONG	API 70	207	196-231
SV_140	CRX™ 140, OBLONG	API 80	172	165-196
SV_175	CRX™ 175, OBLONG	API 100	139	137.5-165
SV_210	CRX™ 210, OBLONG	API 120	131	116.5-137.5
SV_250	CRX™ 250, OBLONG	API 140	101	98-116.5
SV_325	CRX™ 325, OBLONG	API 200	73	69-82.5
SV_400	CRX™ 400, OBLONG	API 230	67	58-69

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REPLACEMENT PARTS

DESCRIPTION

For replacement parts see the replacement part catalogue.

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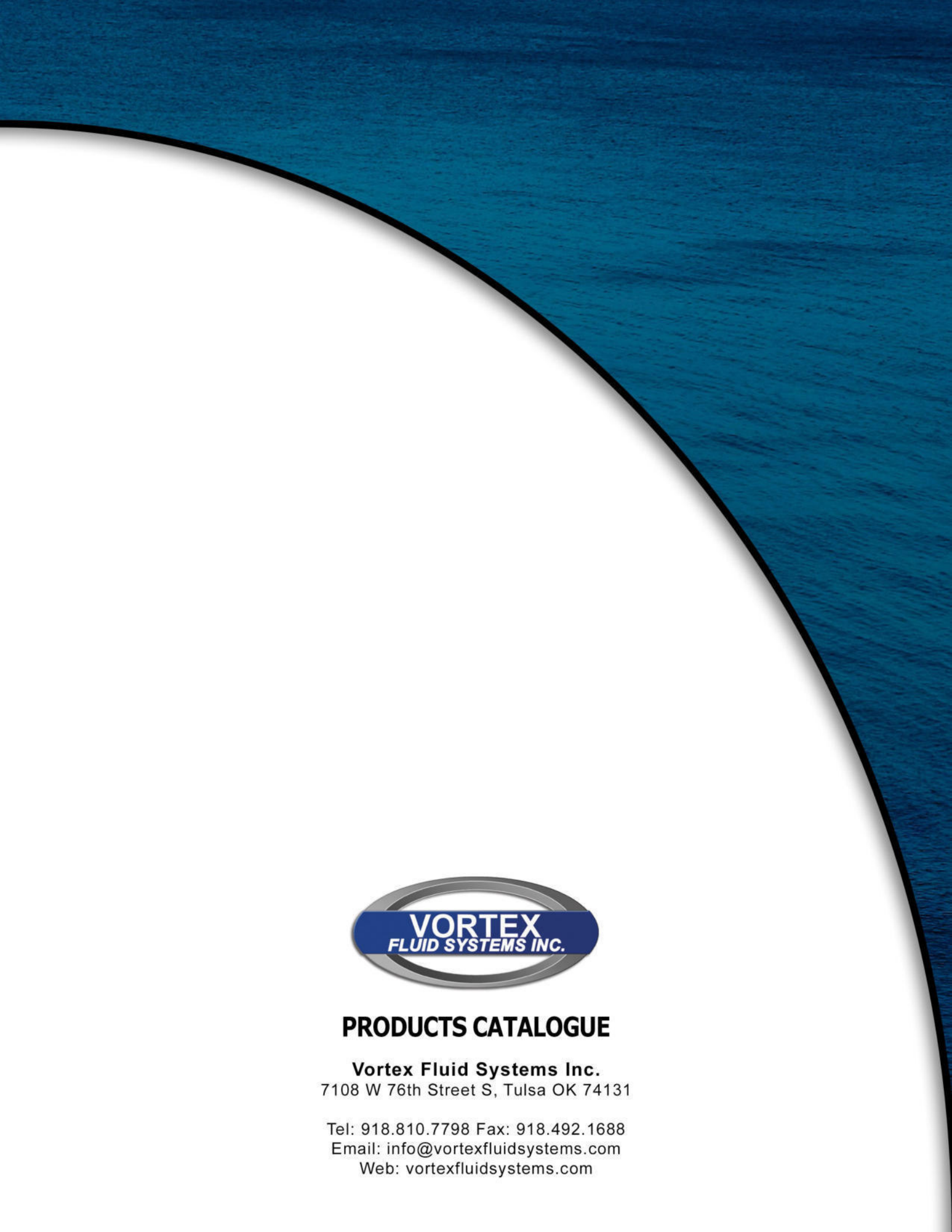

PRODUCTS CATALOGUE

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