



Mi SWACO
A Schlumberger Company

This information is supplied solely for informational purposes and M-I SWACO makes no guarantees or warranties, either expressed or implied, with respect to the accuracy and use of this data. All product warranties and guarantees shall be governed by the Standard Terms of Sale. Nothing in this document is legal advice or is a substitute for competent legal advice.

P.O. Box 42842
Houston, Texas 77242-2842
www.miswaco.slb.com
E-mail: questions@miswaco.slb.com



Mongoose PT Shaker

Linear and balanced elliptical motion combined with configuration flexibility to suit your needs. Exactly.



Features

- Linear motion for fast conveyance and heavy loading; balanced elliptical motion for maximum retention time and drier cuttings
- Elliptical motion at the flip of a switch without stopping the shaker
- Balanced basket functions flawlessly in either linear or balanced elliptical mode, with dry, light loads or heavy loads
- Most reliable mechanical jacking system in the industry — simple and easy to use; requires no pinning
- Largest net-usable screen area among shakers of similar footprint: 21.2 ft² (1.97 m²)

Benefits

- Unique distribution box option can replace flowline possum belly, providing increased handling capacity and dampening the velocity of fluid from the flowline
- Pre-tensioned composite screens for fast screen changes and overall ease of use
- Ultra-tight seal between screen and screen bed eliminates solids buildup and costly bypass of solids

MONGOOSE PT Linear- and Dual-Motion Shale Shaker

APPLICATIONS

Onshore and offshore projects where shaker size is a significant issue and where cuttings with varying quantities and properties are experienced.

PROBLEMS

Because drilling rates and conditions change as a well progresses, solids-control equipment must handle varying solids characteristics. When premium drilling fluids are used, maximum fluids recovery is of critical concern.

SOLUTIONS

The dual-motion MONGOOSE® PT shaker not only manages the high cuttings volumes associated with surface hole sections (linear motion), it can change on the fly to balanced elliptical motion for longer cuttings-retention times. Shaker optimization gets an extra boost from M-I SWACO engineers and field personnel who provide expert service and advice.

ECONOMICS

The generous throughput capacity of the shaker can handle cuttings loads generated by high ROP, saving rig time. The balanced elliptical motion recovers greater amounts of valuable drilling fluid, produces drier cuttings for easier disposal and prolongs screen life.

ENVIRONMENTAL

The MONGOOSE PT shaker processes cuttings more thoroughly than conventional units, producing cuttings that require less treatment for disposal. The thorough processing also reduces the need for dilution which results in smaller waste volumes.

The flexibility of dual motion

The dual-motion shale shaker that adapts as solids change.

M-I SWACO, a Schlumberger company, has combined linear and balanced elliptical motion technology to create the revolutionary MONGOOSE PT dual-motion shaker. The MONGOOSE PT design incorporates a 0.6-hp vibrator motor¹ that allows it to perform on an unparalleled level.

But as drilling conditions change, the MONGOOSE PT dual-motion shaker can be adjusted “on the fly.” Simply flipping a switch on the control box reconfigures the shaker from linear to balanced elliptical motion. There is no need to suspend or shut down operations.

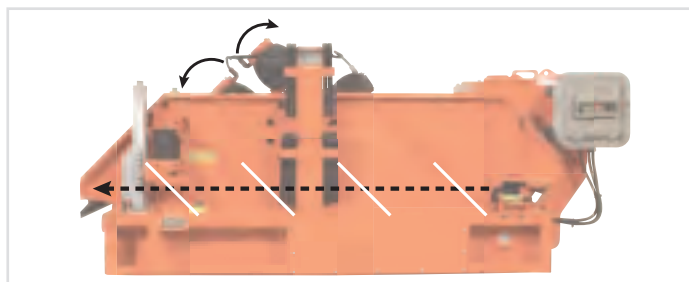
With the MONGOOSE PT shaker operating in the gentler balanced elliptical mode, solids encounter reduced G-forces and longer screen residence time. This results in drier solids, improved drilling-fluid recovery, longer screen life and reduced operating costs.

The economy of linear motion

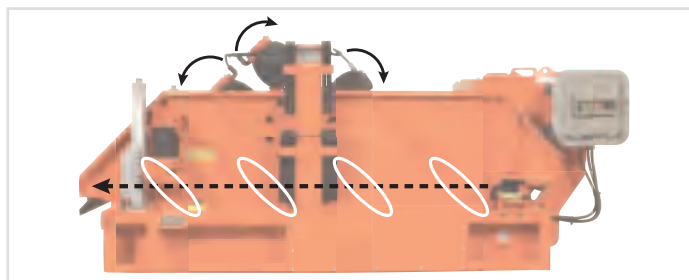
The dual-motor MONGOOSE PT linear-motion shaker is especially effective while drilling top-hole sections where heavy, high-volume solids are usually encountered. In these intervals, shakers need to generate high G-forces to effectively move dense solids across the screens.

Comparison of balanced elliptical motion to linear motion

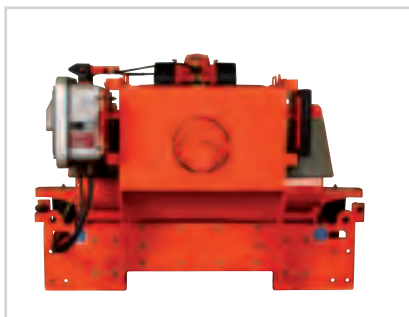
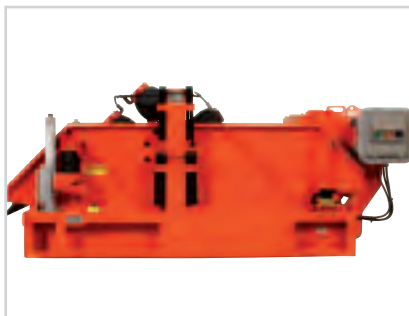
Linear motion



Balanced Elliptical Motion



Basic MONGOOSE PT shaker with header box



SPECIFICATIONS

- Length:
 - Linear motion 116 in. (2,946 mm)
 - Dual motion 120 in. (3,048 mm)
- Width 68.9 in. (1,749 mm)
- Weir height 29 in. (737 mm)
- Height 51 in. (1,295 mm)
- Weight 3,310 lb (1501 kg)

SCREEN DECK AND SCREENS

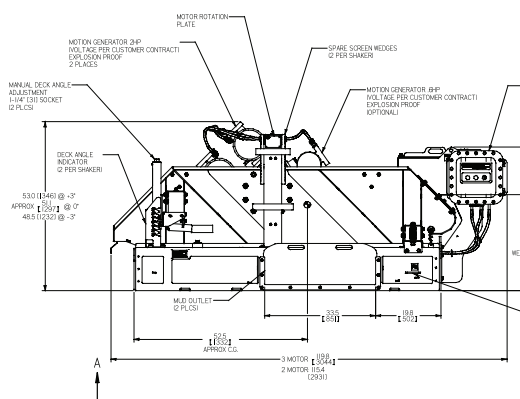
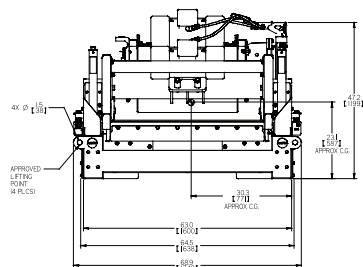
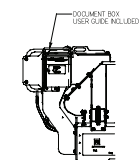
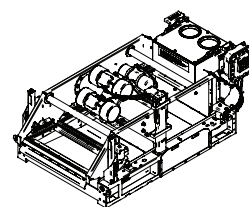
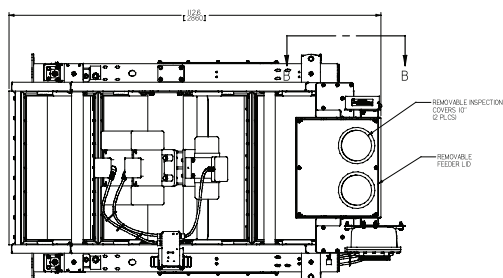
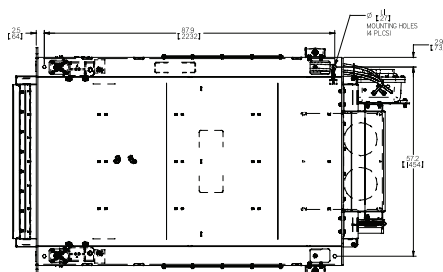
- Screen area:
 - Gross: 29.4 ft² (2.73 m²)
 - Net (API): 21.2 ft² (1.97 m²)
- Deck-angle adjustment:
 - 3° to +3°
- Screen type: Pre-tensioned Composite
 - 4 x 2 ft (1.2 x 0.61 m)
- Four screen panels per shaker

BASKET ISOLATION

- Powder-coated steel springs

MOTOR SPECIFICATIONS

- Two (2) main 2-hp vibrator motors
- One (1) additional 0.6-hp vibrator motor on dual-motion model
- 460V/60 Hz/1,800 rpm or 400V/50 Hz/1,500 rpm
- Explosion proof
- Class I, Groups C and D
- UL/cUL, CE, ATEX



Basic MONGODB PT shaker with possum belly

SPECIFICATIONS

- Length 125 in. (3,175 mm)
- Width 68.9 in. (1,749 mm)
- Weir height 29 in. (737 mm)
- Height 51 in. (1,295 mm)
- Weight 4,070 lb (1,846 kg)

SCREEN DECK AND SCREENS

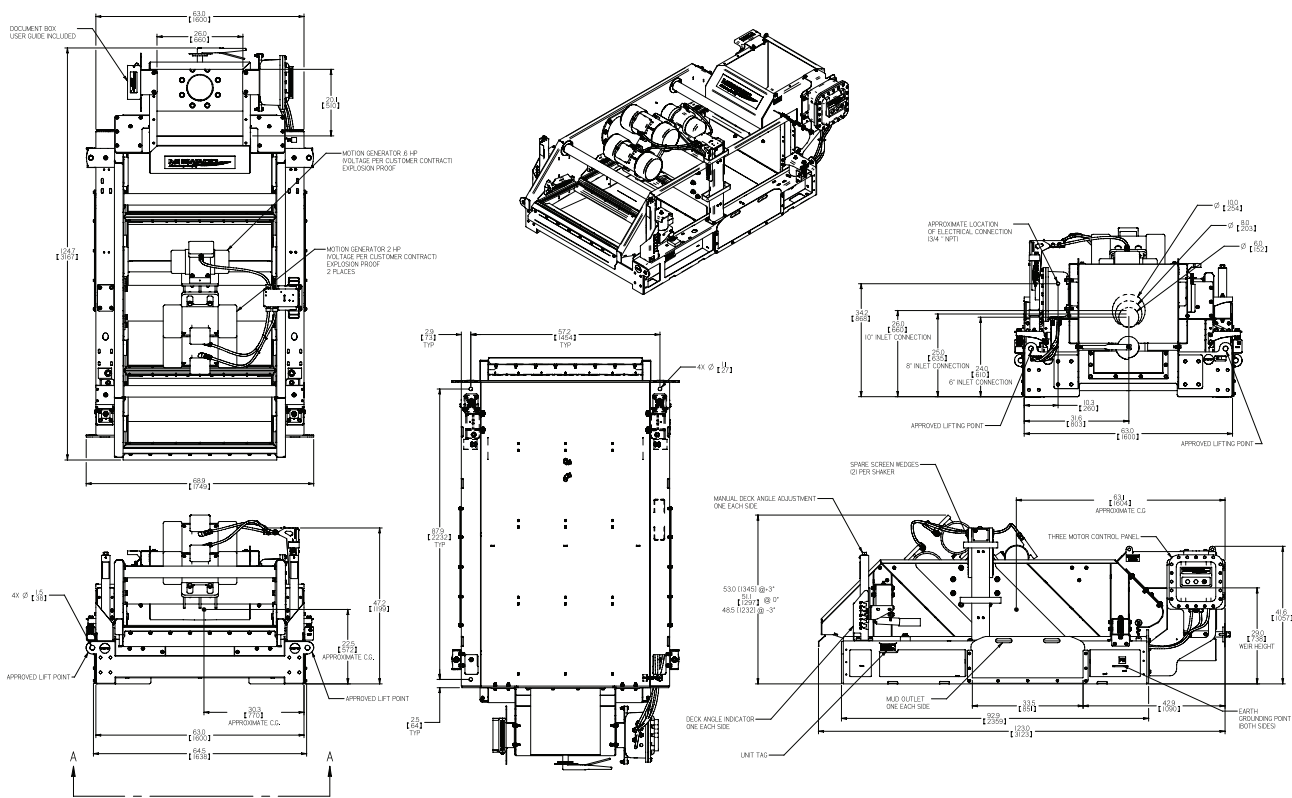
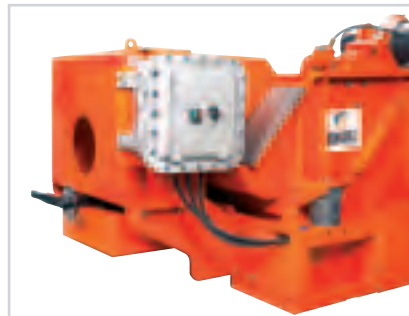
- Screen area:
Gross: 29.4 ft²(2.73 m²)
Net (API): 21.2 ft²(1.97 m²)
- Deck-angle adjustment: -3° to +3°
- Screen type: Pre-tensioned Composite
4 x 2 ft (1.2 x 0.61 m)
- Four screen panels per shaker

BASKET ISOLATION

- Powder-coated steel springs

MOTOR SPECIFICATIONS

- Two (2) main 2-hp vibrator motors
- One (1) additional 0.6-hp vibrator motor on dual-motion model
- 460V/60 Hz/1,800 rpm or 400V/50 Hz/1,500 rpm
- Explosion proof
- Class I, Groups C and D
- UL/cUL, CE, ATEX

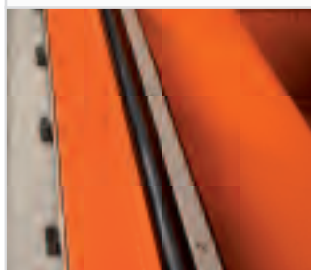


Key features of the MONGOOSE PT shale shaker

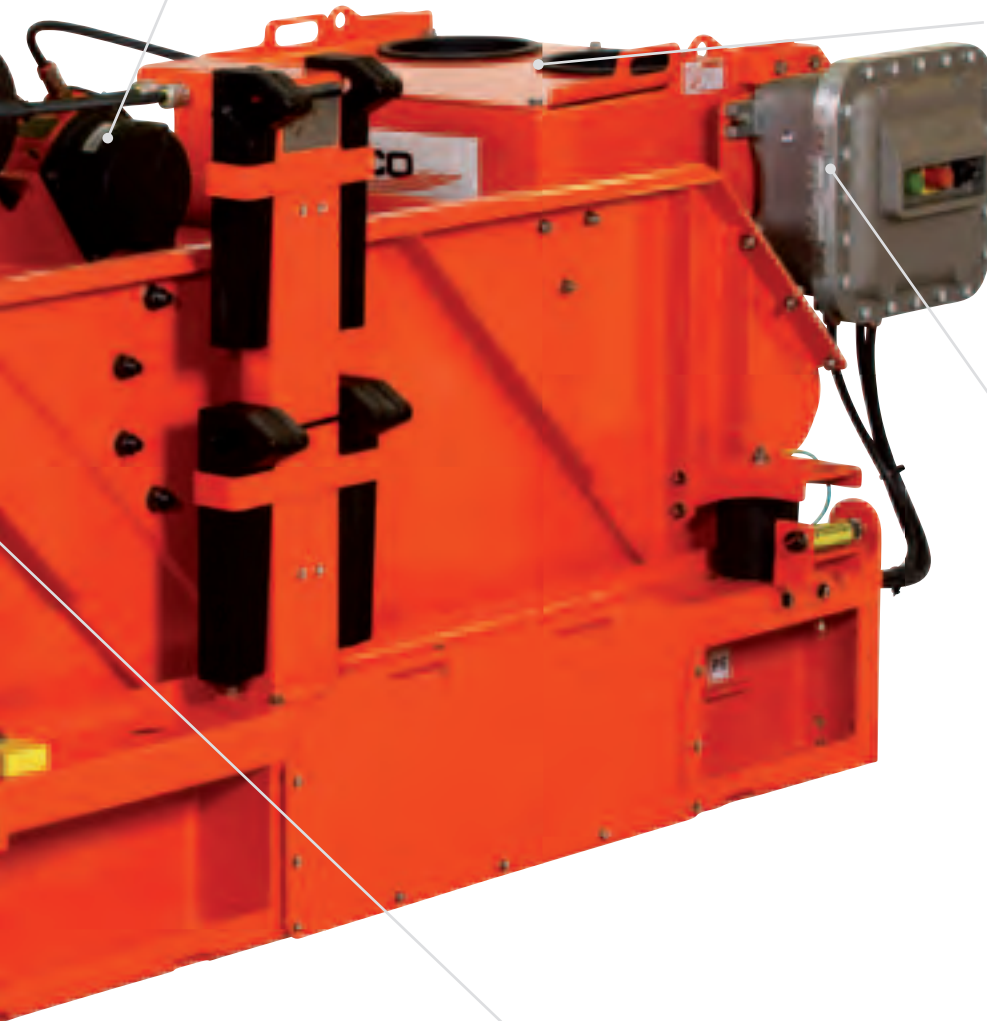
(2) 2 hp motors

**Largest non-blanked screen area
among shakers of similar footprint:
21.2 ft² (1.97 m²)**

**Patented ultra-tight seal
between screen and
screen bed**



(1) 0.6 hp motor



Patented high capacity distribution box with low weir height.

Motion change during operation at the "flip of a switch"



Heavy duty, reliable, mechanical deck adjustment system. Jacks with corrosion resistant coating



MONGOOSE PT dual, triple and quad shakers take performance to a new level

MONGOOSE PT shakers can be combined together to deliver even more capabilities. Two, three, or four, MONGOOSE PT shakers can be pre-aligned at the factory and mounted together on a single skid.

The unit is engineered to be moved by a single lift, reducing the time associated with rig moves.

The dual and triple units offer a common possum belly and include integral feeder slide gates to balance flow or completely divert flow from a shaker. Multiple configurations of mud cleaners can be added to dual, triple, or quad shakers.

Features and benefits

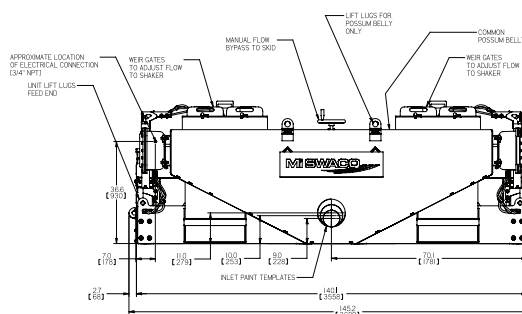
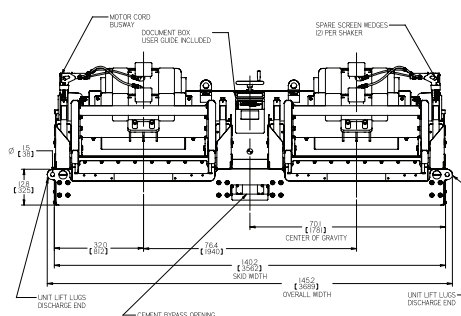
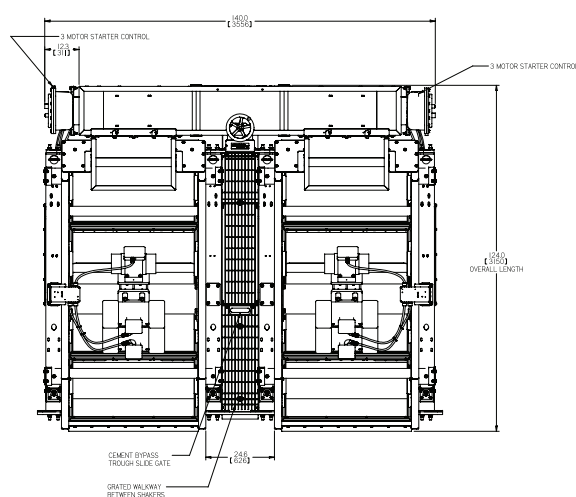
- Combines up to four MONGOOSE PT shakers into one integral assembly
- Standard, dual and triple assemblies include common possum belly (feed manifold optional for dual, triple or quads)
- Can be lifted/rigged as single unit
- Single flowline connection to shakers
- Feeder slide gates integral to possum belly to regulate flow
- Available options:
 - Multiple header boxes
 - Mud cleaner
 - Lifting frame
- Integral walkways between shakers for safe and proper access
- Bypass valve offered to divert flow around shakers

MONGOOSE PT Dual Shaker

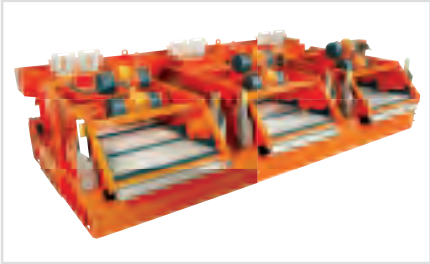


Dual Specifications

- Length 124 in. (3,150 mm)
- Width 145 in. (3,689 mm)
- Weir height 29 in. (737 mm)
- Height 51 in. (1,295 mm)
- Weight 9,400 lb (4,264 kg)

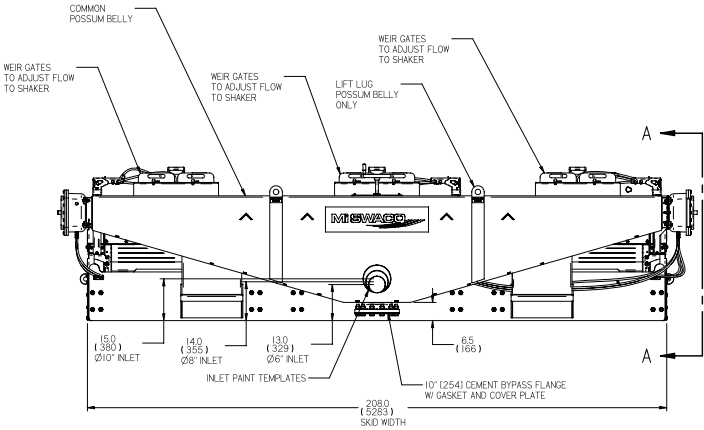
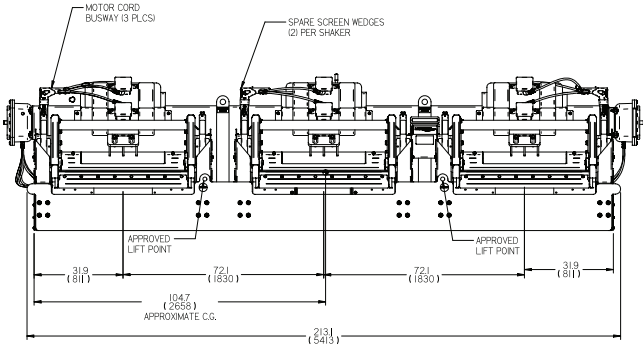
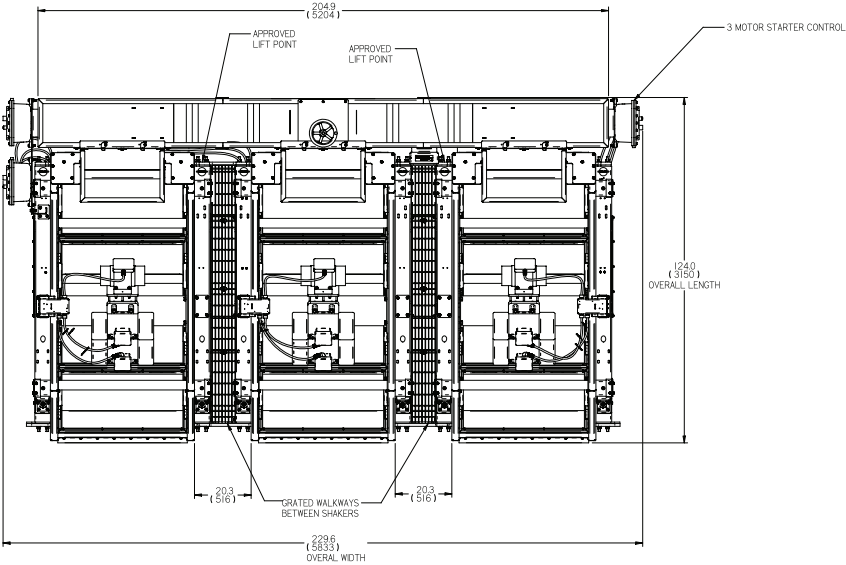


MONGOOSE PT Triple Shaker



Triple Specifications

- Length 124 in. (3,150 mm)
- Width 230 in. (5,842 mm)
- Weir height 33 in. (838 mm)
- Height 55 in. (1,297 mm)
- Weight 15,000 lb (6,804 kg)

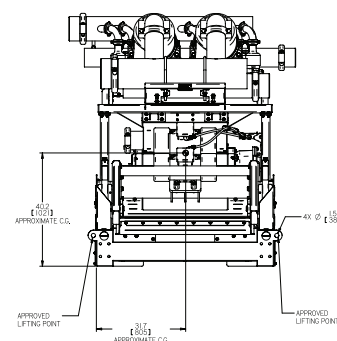
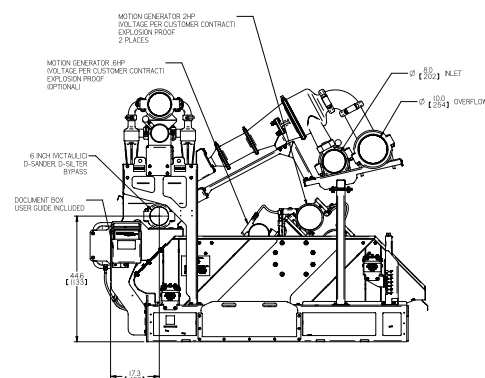
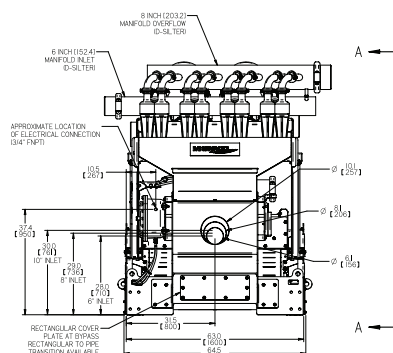


The MONGOOSE PT shaker configures to your needs

MONGOOSE PT Mud Cleaner

Mud cleaners can be installed on the single, dual and triple configurations:

- The D-SANDER* unit is available in two- or three-cone
- The D-SILTER* unit is available in six, eight or ten twin-cone
- In dual and triple configurations, header box is replaced with a common possum belly. Multiple header-box setup is also an option.
- Low profile (approx. 64 in. [1,626 mm]) to top of trough
- Integral bypass between shaker and D-SILTER/D-SANDER units
- Compact footprint
- Allows inspection/maintenance without ladders or scaffolds
- Operates as D-SILTER and D-SANDER units and flowline shaker independently



Composite screens provide longer life and more screen area

M-I SWACO high-capacity composite shaker screens are the most rugged, long-lasting and efficient screens available. The new composite screens, unique in the industry, provide resistance to corrosive drilling fluids. The screens also offer significant fluid capacity, excellent resistance to blinding, drier solids discharge and a large net-usable screen area.

Most significantly, our unique design does not compromise performance. The new screens perform on par with the MAGNUM* and MAGNUM XR* Mesh screens that have been used effectively in the field for years.

Composite construction creates an ultra-tight seal between the screen and screen bed and eliminates solids buildup and costly solids bypass. The unique screen-locking mechanism wedges the screen firmly in place and allows the screen to be removed for repair or replacement.



Success Stories

Florida: MONGOOSE PT slashes costs in drilling water and injection wells

The situation

The client identified key aspects of the solids control operation that required a thorough evaluation during a water and injection well drilling program, including performance of the M-I SWACO MONGOOSE PT shaker compared to three competitor units, the application of D-SILTER and D-SANDER units, and the number of screens required and their post-run condition. The existing flow distribution was judged sufficient to compare the performance.

The solution

The shakers were installed sequentially with the MONGOOSE PT shaker in the first position and the competitor shakers in the remaining two. Because finer mesh screens could be used with the MONGOOSE PT shaker, processing higher cuttings volumes was possible.

The results

The MONGOOSE PT shaker handled 100% of the flow throughout the trial using various screen meshes. Of those used, only four M-I SWACO screens were unusable at the end of the test, compared to 33 screens on the competitor units. The bed area of the competitor units was full of cuttings that had bypassed the screens, indicating poor sealing. The MONGOOSE PT shaker reduced waste volume, saving the operator an average of \$40,000 per well in waste hauling costs. Further, it recovered a significant volume of reusable drilling fluid. The client subsequently ordered 15 shakers.

Russia: MONGOOSE PT composite screens excel, cut costs

The situation

A Russian operator established as an objective the reduction of overall operational cost through sustained high performance and extended operational life of shaker screens. The project challenge was to provide screens that delivered longer life and sustained high performance, in addition as solids separation, fluid handling capacity, minimized bypass and minimum whole fluid discharge was a concern. Further, the screens would need to improve drilling performance through efficient fluid specifications maintenance, optimum rheological values, high rate of penetration and borehole stability.

The solution

M-I SWACO installed on the rig two MONGOOSE PT shakers and one MONGOOSE PT Mud Cleaner fitted with pre-tensioned composite screens. For the test, an onsite team of solids control and drilling fluid specialists focused on achieving maximum cost and operational efficiencies.

The results

The superior fluid handling and solids-removal capacity intrinsic to these screens resulted in overall increased solids control efficiency and a 13% reduction in the cost of drilling fluid chemicals per well. The screens showed exceptionally good screen life, which also means less overall project costs for the customer.

To find out more about the MONGOOSE PT shaker and how it's performing for our customers worldwide, please call the M-I SWACO office nearest you.



Deck-angle adjustment



Unique screen-locking mechanism



Bypass door



Adjustable feeder slide gates control flow distribution