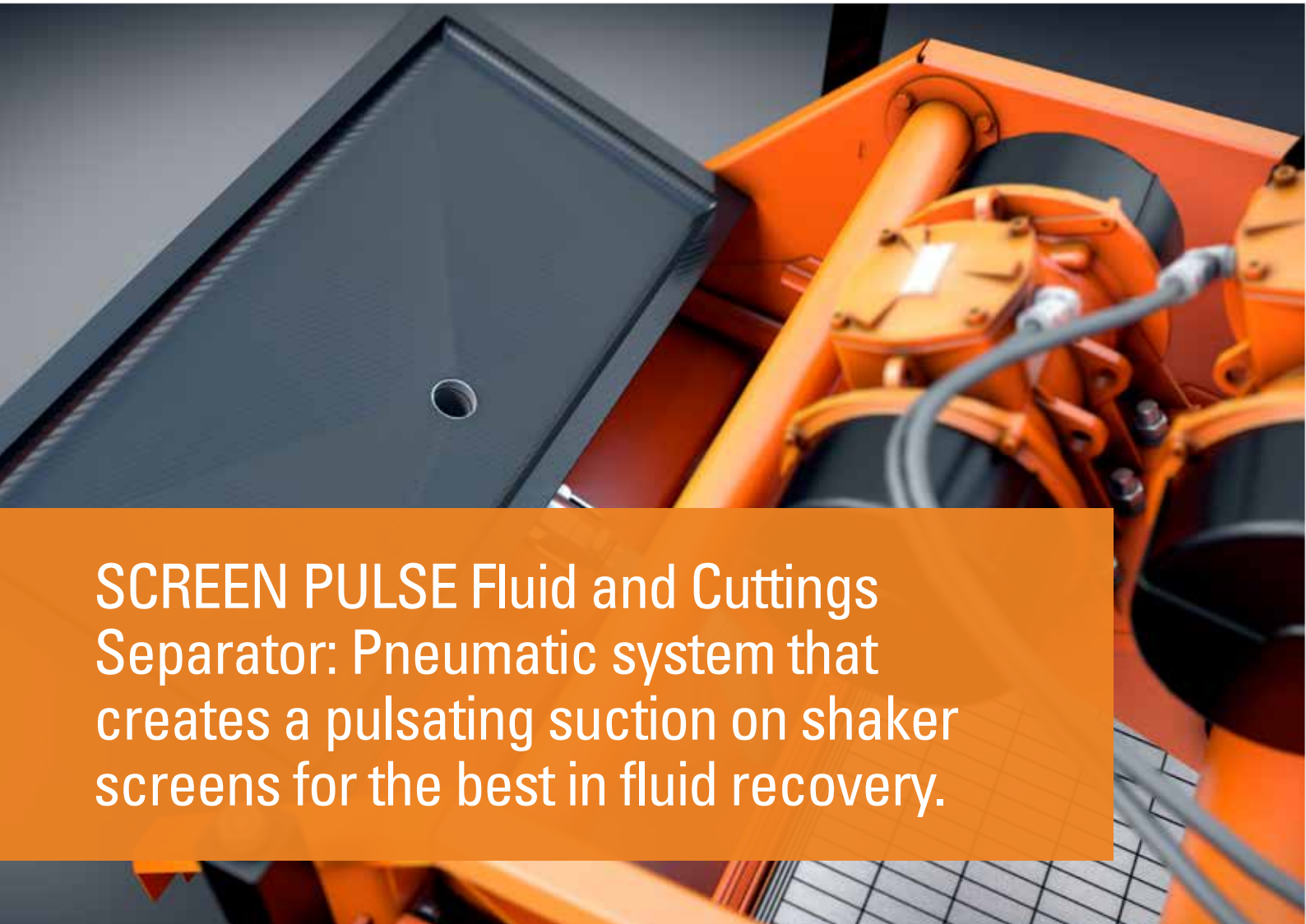




# SCREEN PULSE Fluid and Cuttings Separator

**Pulsating technology joins ultra-efficient screens for the utmost in cuttings treatment, fluid recovery**



## SCREEN PULSE Fluid and Cuttings Separator: Pneumatic system that creates a pulsating suction on shaker screens for the best in fluid recovery.

To meet ever-stringent global onshore and offshore disposal standards, cuttings must be stripped of free fluid, meaning higher treatment, transportation and disposal costs for operators. The conventional approach to improving separation can cause cuttings attrition that compromises solids removal efficiency and generates formation-damaging fines that hinder drilling fluid performance and can require continuous treatment. In today's costly operating environment, discarded "free fluid" includes drilling fluids that could be reused in active systems.

The SCREEN PULSE<sup>1</sup> fluid and cuttings separator puts those issues to rest. With the SCREEN PULSE fluid and cuttings separator, M-I SWACO, a Schlumberger company, combined the very latest in pulsating technology with the industry's most advanced high-capacity, long-life composite shaker screens and shakers to deliver optimum separation efficiency and base fluid recovery.

# The gentle touch of the SCREEN PULSE fluid and cuttings separator removes costly drilling fluid and improves your revenue stream

## Features

- Drop-in, weld-free design
- Configured for offshore, onshore applications
- Compact design
- Uses existing G-Forces
- Flexible pulsating technology
- External mounts for retrofitted flow-line installation
- Meets EPA 9095B standard
- Compatible with OBM, WBM and SBM

## Benefits

- Optimizes separation efficiency
- Maximizes base fluid recovery
- Minimizes or eliminates dilution
- Reduces overall waste stream
- Promotes safe operations
- Slashes transportation, waste disposal costs
- Requires no additional equipment
- Reduces personnel requirements
- Decreases chemical consumption
- Reduces overall operations costs
- Enhances HSE profile

The SCREEN PULSE fluid and cuttings separator from M-I SWACO uses a lightweight pan installed as a drop-in within the flow-line shaker bed and underlying the last screen on the discharge end. The lightweight pans of the SCREEN PULSE fluid and cuttings separator is available for M-I SWACO MONGOOSE<sup>®</sup>/MEERKAT<sup>®</sup> series shakers and will be available for an extensive range of shakers from other major suppliers.. Since the installation is retrofitted, it requires no welding.

The SCREEN PULSE fluid and cuttings separator is unique. Rather than applying increased friction and higher G-Forces to a flow-line shaker, it uses suction to gently pull all the residual base fluid from the cuttings surface to head-off attrition and reap all the benefits of ultra-fine screen separation efficiency. And, since you no longer have to add expensive and waste-adding treatment chemicals to compensate for the fluid volume lost to the cuttings, dilution rates are reduced dramatically. At the same time, expensive base fluid that once would be discarded is recovered, clearing the way for reuse in the active mud systems.

And, it does all this in a system that is safe, compact, ultra-efficient, and easy to install and operate. The system includes an integral HSE-enhancing automated air

operated pulsing unit supplied by rig air or an additional portable air compressor. Recovered fluids stay within shaker flow system, omitting related NPT, the SCREEN PULSE fluid and cuttings separator eliminates the costs, risks and potential downtime associated with employing ancillary treatment equipment and additional personnel. The SCREEN PULSE fluid and cuttings separator also delivers cuttings that meet the most stringent environmental standards, including the US Environmental Protection Agency's (EPA) quantitative 9095B paint filter liquids test.

Whether distinctly configured for an onshore or offshore application, the revolutionary SCREEN PULSE fluid and cuttings separator technology is your field-proven solution for minimizing waste management costs and optimizing your HSE profile. What's more, the SCREEN PULSE fluid and cuttings separator quickly pays for itself by transforming what would be waste into a profitable commodity.



# The SCREEN PULSE separator delivers the industry's driest cuttings, with no do-overs




The SCREEN PULSE fluid and cuttings separator may be simple to install and operate, but the results are remarkable. No longer do you have to treat and re-treat to ensure your cuttings comply with environmental standards.

Installation of the air pulsating pan at the flow line is a simple and low-impact operation that requires zero fabrication. The SCREEN PULSE fluids recovery and cuttings drying unit is temporarily attached to a shale shaker beneath the last screen on the discharge end of the shaker itself or permanently affixed to the shaker at the discharge end. Exact configuration is determined by the shaker model in use.

The final components are the pulse panel, pan and either a supplied air compressor or the use of rig air. It operates by means of compressed air creating suction on the last screen surface, pulling additional fluid off the cuttings that would otherwise be discharged into a cuttings pit or collection system. The unit maximizes the volume of recovered and reused fluids and it provides dryer cuttings. Dryer cuttings mean less weight and lower cuttings volume for trucking and ship-to-shore transfer operations. These benefits will provide customers with a reduction in operational cost and non-productive time, as well as an enhanced HSE profile.

The SCREEN PULSE fluid and cuttings separator enhances drilling fluid maintenance and performance, reduces fluid loss at the shaker, and eliminates the residual free liquid on discarded drill cuttings. As a result, ancillary costs for waste handling, such as crane picks, cuttings boxes, transportation, and disposal, are reduced or totally eliminated depending on geographical regulations.

As an added bonus, this totally unique process allows for the use of maximum screen sizes on flow-line shakers without the risks of flooding and excessive fluid retention on cuttings.



## Field proven to give an entirely new meaning to “free fluid”

The new generation SCREEN PULSE fluid and cuttings separator has been field proven in an ever-increasing number of onshore applications to consistently deliver a low-cost, but highly efficient solution for solids treatment and fluid recovery. Time and time again, the SCREEN PULSE fluid and cuttings separator delivers screening nearly 40% finer than conventional flow-line shaker configurations. Liquid discard rates are reduced up to 50% with oil-on-cuttings (OOC) reduced some 35%. Compared to drying shakers, the SCREEN PULSE fluid and cuttings separator has been shown to reduce waste management costs by more than 20%.

With a conventional flow line shaker, up to 2 bbl/hr of high-grade synthetic or oil-based fluid is lost with the cuttings as surface tension allows free-flowing over the screens. Not so with the SCREEN PULSE fluid and cuttings separator. With the SCREEN PULSE fluid and cuttings

separator, we apply pulsed air to either an internal or external pan under the last screen on the discharge end of the shaker or attached to the end of shaker itself. This combination effectively halts fluid “flow over” and allows for finer screens.

Depending on the pool depth control, this novel configuration routinely allows the recovery of 5-30 bbl/day with an average daily recovery rate of 15 bbl depending on hole size, ROP, formation etc., giving you a net savings in recovered fluid.

In addition, by producing dryer cuttings that meet all appropriate regulations, the SCREEN PULSE fluid and cuttings separator paves the way for you to discard solid wastes with complete confidence, while incurring no additional treatment or disposal costs. Reducing chemical treatments boosts your bottom line considerably, giving way to significant operator savings.

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# The SCREEN PULSE Separator also gives a major boost to your QHSE profile

While the SCREEN PULSE fluid and cuttings separator reduces your overall costs, it likewise is elevating your QHSE profile to new heights. The simplistic design at the core of this technology allows for single-person operation, which reduces personnel risks associated with having to use multiple pieces of fluid recovery equipment.

In addition, by pulling fluids through the screen surface the unit consistently

recovers more drilling fluid than similar systems operating without the unit. Clearly, this technology affords M-I SWACO the means to differentiate and demonstrate its solids control leadership in the marketplace.

These safety features further reinforce the SCREEN PULSE fluid and cuttings separator as the one solution for meeting today's increased regulatory requirements.

## **Put our SCREEN PULSE fluid and cuttings separator to work for you**

To find out more about our SCREEN PULSE fluid and cuttings separator technology and how it's performing for our other customers, contact your local M-I SWACO representative.



# The SCREEN PULSE fluid and cuttings separator proves itself in the field

**SCREEN PULSE fluid and cuttings separator cuts costs nearly \$107,000 and saved an additional \$62,000 in recovered drilling fluids**

## **The Situation**

The operator requested a solution to reduce the exorbitant and steady rising costs of managing the high volume of oil based cuttings generated from its drilling program in North America, drilling in the Woodford Shale basin. The operator was currently using a cuttings process package that included a mobile VERTI-G cuttings dryer and centrifuge to dry their cutting for transportation at a cost of \$8.50 per foot @ 12,500' of OBM section.

## **The Solution**

Upon the recommendation of M-I SWACO, the operator selected the uniquely engineered SCREEN PULSE fluid and cuttings separator in conjunction with M-I SWACO's High-capacity, long-life composite shaker screens, which has demonstrated its capacity to dry cuttings that meet or exceed the EPA 9095B paint filter liquids test, recover more oil base fluid and reduce the overall volume and costs of waste disposal. The SCREEN PULSE fluid and cuttings separator was specially configured to meet the space constraints of any location with its small 27" x 33" inch foot print.

## **The Results**

The SCREEN PULSE fluid and cuttings separator proved to be the ideal solution, reducing the operator's cumulative drilling waste management costs by \$106,250 in the OBM interval. An additional saving of \$45,600 was generated by the recovery of 285 bbl of oil based mud in the 20 day, 12,500' interval that was reused in the active drilling fluid system.



## ONLINE RESOURCES

### **Solids Control**

[www.miswaco.com/solidscontrol](http://www.miswaco.com/solidscontrol)

### **Shale Shakers**

[www.miswaco.com/shakers](http://www.miswaco.com/shakers)

### **Oilfield Screens**

[www.miswaco.com/screens](http://www.miswaco.com/screens)

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