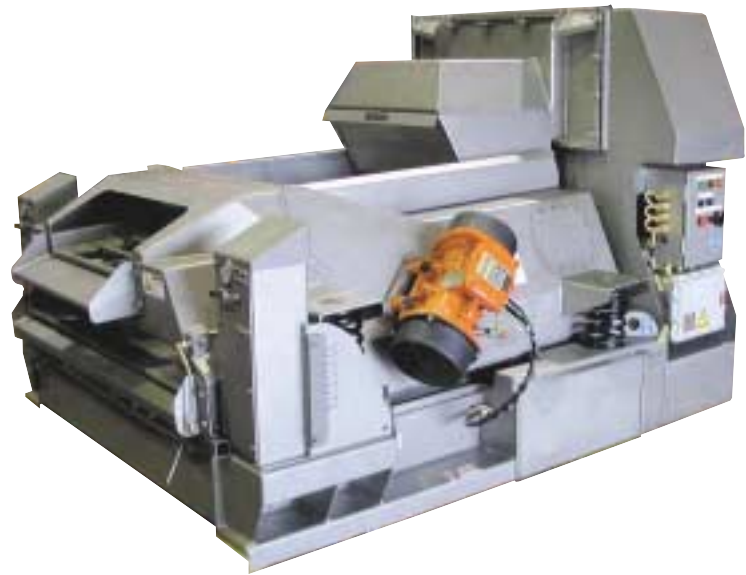


BEM-600 Shaker

*Balanced elliptical motion for better solids removal
and fluid recovery with less screen wear*



Mi SWACO

Customer-focused, solutions-driven

Balanced elliptical motion produces a dryer cuttings discharge



APPLICATIONS

Offshore and onshore projects where more effective solids/fluid separation is required in addition to the reduction of costs related to shaker performance.

PROBLEMS

Conventional shakers exhibit one or more — or all — of the following: inefficient solids handling and fluid recovery, screen blinding, premature screen wear and safety issues.

SOLUTIONS

The BEM-600* shaker is the second-generation balanced elliptical motion shale shaker from M-I SWACO*. It provides better solids removal and fluid recovery with less screen wear while occupying a relatively small footprint.

ECONOMICS

Significantly dryer cuttings, improved solids removal and fluid recovery at high feed rates, longer screen life and minimal downtime add up to significant savings. For economical retrofits, the BEM-600 stainless steel basket motor assembly can be installed on existing shaker skids.

ENVIRONMENTAL

More efficient fluids/solids separation results in significantly smaller disposal volumes of dryer cuttings.

Better solids and fluids processing, less screen wear

The BEM-600 shaker is the second-generation balanced-elliptical-motion shale shaker from M-I SWACO. Its performance is centered on our field-proven and patented, balanced-elliptical-motion technology. Independent testing has confirmed that, compared with other shaker types, this gentle rolling motion consistently provides better solids removal and fluid recovery with less screen wear.

The BEM-600 shaker has been designed with a number of significant refinements that include:

- Smaller footprint
- Fully stainless steel design
- Dual decks (for scalping and fine solids separation)
- Pneumatic screen clamping
- Detachable feed trough

As a result, the BEM-600 shaker routinely provides:

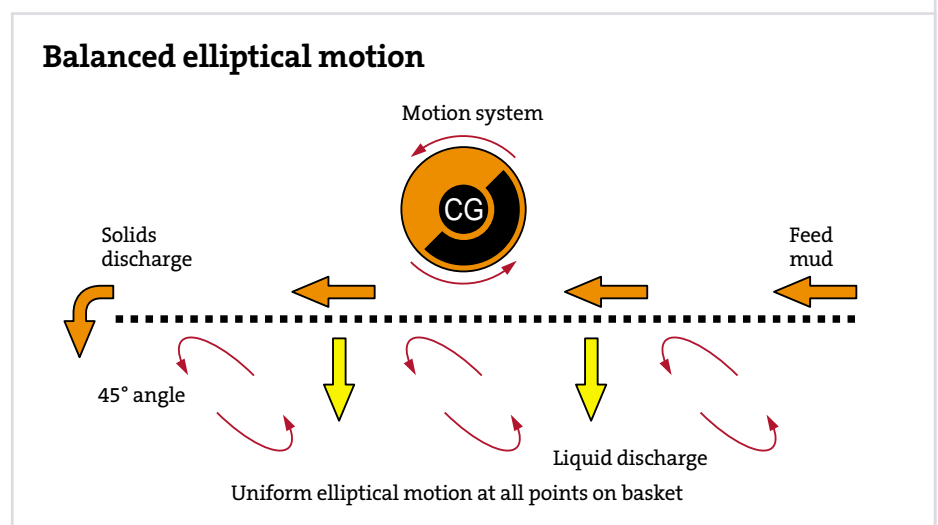
- A compact unit built for long life
- Improved solids removal and fluid recovery at higher feed rates
- Faster and safer screen changing

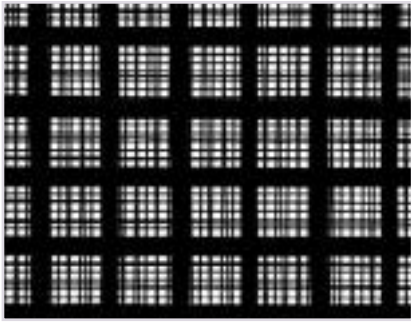
The easy retrofit to BEM-600 quality

An important option is the ability to retrofit the stainless steel BEM-600 basket motor assembly onto existing shaker skids. Built to quickly retrofit, the BEM-600 shaker can be installed in a matter of hours with minimal modification.

The results of a BEM-600 retrofit are:

- Reduced shaker replacement costs
- Minimal downtime
- Significantly improved performance

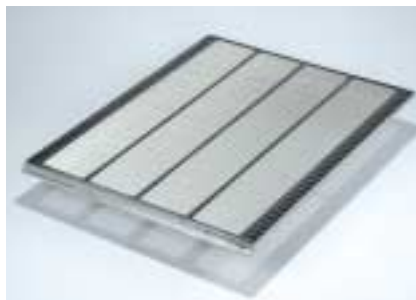




BEM-600

Two fine screening wire mesh choices:

- High-capacity mesh (HC) designed to produce excellent flow rates
- Long-life mesh (XR*) designed to extend time between screen changes



Upper deck contains two pre-tensioned, flat-panel scalping screens with a gross screen area of 13.8 ft² (1.3 m²)

Fully stainless steel design

Lower deck contains four pre-tensioned, flat-panel primary screens with a gross screen area of 27.6 ft² (2.6 m²)

Flow-back pan between top and bottom decks

Deck-angle adjustments -3° to +5°

Screen clamping by single-point, pneumatic control



Bed-angle indicator



Detachable header box



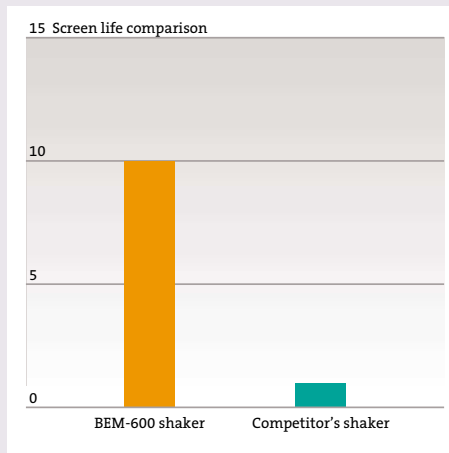
Control panel suitable for remote operation



State-of-the-art motion generators provide low maintenance

CE, ATEX, NORSOK and UL-rated versions available

BEM-600 performance data



MAGNUM screens averaged ten times the screen life of the competitor's shaker.

This graph provides a screen-life comparison between the M-I SWACO BEM-600 shaker fitted with 165- and 200-mesh MAGNUM[®] HC screens and a competitor's shaker fitted with 165- and 200-mesh TBC HiFLO[®] screens. The screen life achieved by the BEM-600 shaker was vastly superior, averaging ten times that of the competitor's shaker. Only one BEM-600 screen failed during the test, compared to 10 screen failures for the competitor's shaker.

The BEM-600 shaker also outperformed the competitor's shaker under field conditions by processing 25% more drilling fluid, using screens with the same mesh.

The balanced elliptical motion generated by the BEM-600 shaker assisted in discharging cuttings that were an average of 7% drier than those discharged by the competitor's shaker.

Features and Benefits

Stainless steel construction

- Reduces maintenance costs as a result of low corrosion

Patented¹, balanced elliptical motion

- Produces a drier cuttings discharge
- Results in improved separation efficiency

Pneumatic quick clamping of screens³

- Ease of screen changing operation (top and bottom decks)
- Speedy screen changing

Remote-controlled, pneumo-hydraulic deck-angle adjustment

- Quick operation
- Reduces mud losses from screens

Screen clamping and angle adjustment operated by rig air supply

- Low maintenance, low utilities

MAGNUM* screen technology²

- Increases effective open area
- Improves process capacity
- Maximizes screen life

Integral scalping screen

- Improves process capacity
- Reduces installation costs

Easily retrofits existing shakers

- Reduces installation costs

Detachable header box and flow distributor

- Flexible installation

State-of-the-art motion generators

- Low maintenance
- Oilfield proven

ATEX, NORSOK and UL-rated versions available

- Meets certification requirements at highest level

Control panel suitable for remote operation

- Reduces operator exposure to vapors associated with drilling fluids

Easy-to-install optional vapor-extraction hood

- Reduces operator exposure to vapors associated with drilling fluids

All screens front load

- Improves safety for operators
- No need for operators to maneuver between shakers during normal operations

Uses pre-tensioned screens

- Allows for quicker screen changing (top and bottom decks)
- Extends screen life

Special, lightweight screen design

- Allows for easier screen handling
- Allows for recycling of screen frame

Flow-back pan between top and bottom decks

- Maximizes effective screening area

Integral gumbo screen

- Improves gumbo separation

Dual-angle bottom deck

- Improves separation of water-base-mud cuttings

Shallow header tank

- Better fluids distribution to the screens
- No solids settling

Quiet operation

- Low operational noise levels ensure safety

Sloping sump design with left and/or right discharge

- Minimizes settling of ultra-fines

Bed-angle indicator

- Aids accurate adjustment of basket angle

Fully supported by M-I SWACO design and service organization

- Assistance with rig installation surveys, flow distribution design to shakers, as well as shaker house and solids-control system design

¹Vibratory Screen Separator U.S. Patent No. 5,265,730

²U.S. Patent No. 6,431,368

³Patent pending

BEM-600 Shaker Specifications

Dimensions

- Length 100.3 in. (2,546 mm)
- Width 81.2 in. (2,063 mm)
- Weir Height 43.7 in. (1,110 mm)
- Height 64.5 in. (1,638 mm)
- Weight 4,800 lb (2,177 kg)

Screen Deck and Screens

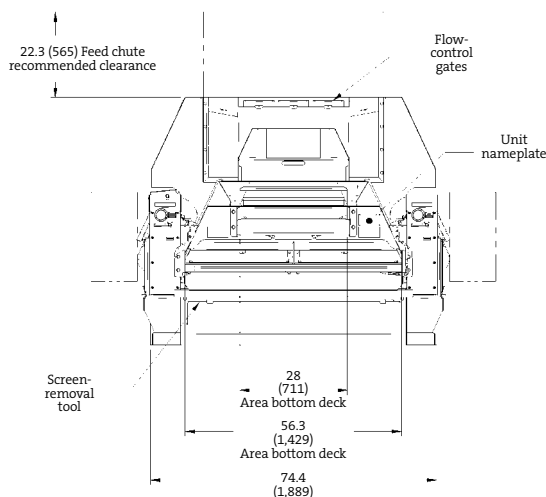
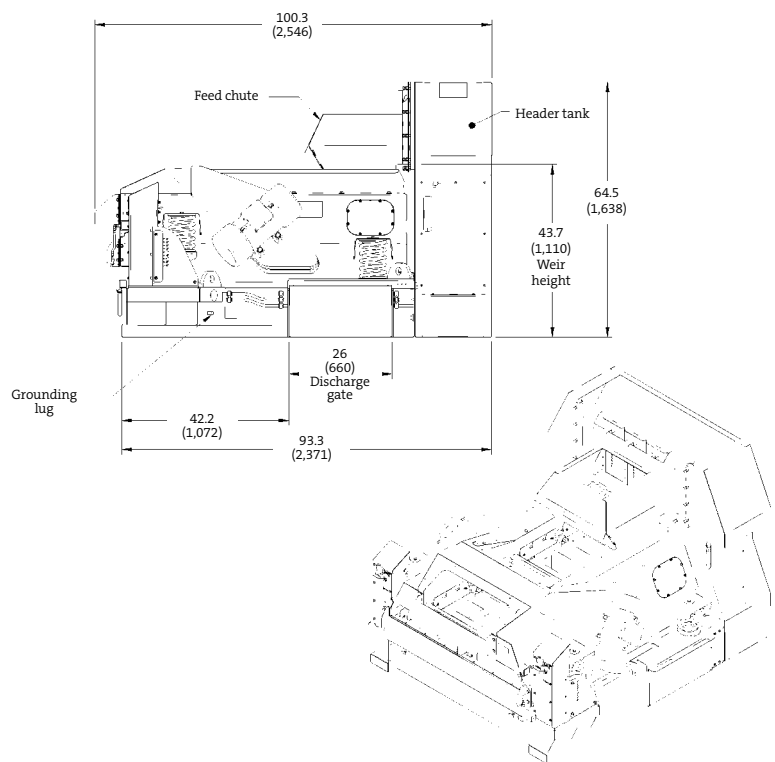
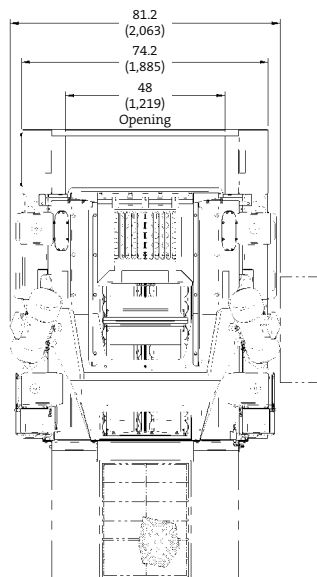
- Gross screen area
 - Scalping deck 13.8 ft² (1.3 m²)
 - Primary deck 27.6 ft² (2.6 m²)
- Net (API) screen area
 - Scalping deck 10.7 ft² (1 m²)
 - Primary deck 21.5 ft² (2 m²)
- Deck angle adjustable: +5°, -3°
- Screen type: Pre-tensioned
- Screen clamping: Pneumatic

Basket Isolation

- Coated carbon steel springs

Motor Specifications

- Two (2) 2.0-hp vibrator motors
- 460V/60 Hz/1,800 rpm or 400V/50 Hz/1,500 rpm
- Explosion proof
- Class I, Groups C and D
- Class II, Groups E, F and G
- UL, CE, CSA, ATEX, NORSOK
- Motor weight: 200 lb/60 Hz (91 kg, 60 Hz)
216 lb/50 Hz (98 kg, 50 Hz)



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