



Triple/S Dynamics, Inc.

Engineering & Manufacturing

## Texas Shaker® Vibrating Screen



- **Unmatched capacity**
- Maximum screening efficiency
- **Outstanding reliability**
- Superior vibration isolation

With over a century of application experience, Triple/S Dynamics is a leading manufacturer of screening, conveying and separating equipment for the processing industries. Our diverse product line includes vibrating equipment, components and systems each tailored to the specific customer and their application, including the Texas Shaker® Vibrating Screen, the original horizontal motion conveyor, the Slipstick® and the Sutton line of Gravity Separators and Stoners. The result of an evolutionary design process, Triple/S Dynamics has been building the Texas Shaker Vibrating Screen for over 40 years.

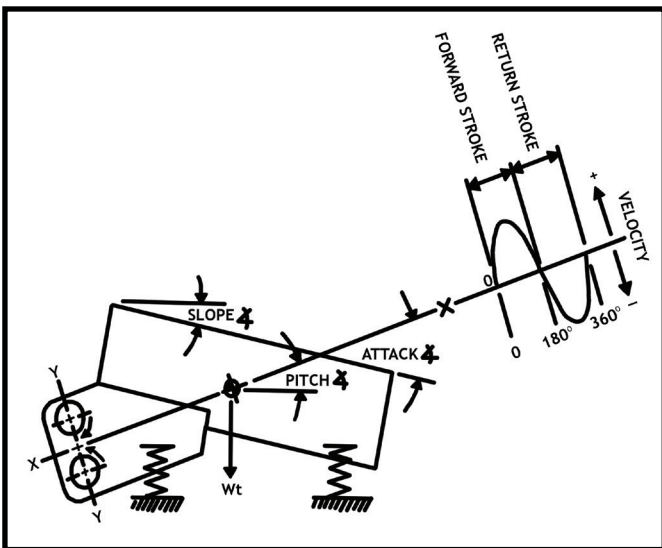
## Form and Function



The diagram illustrates the motion dynamic and the basic geometry of the TEXAS SHAKER.

Depending on the application, the pitch angle may vary from zero to five degrees and the slope from six to ten degrees. The attack angle will vary from six degrees for scalping and precision sizing with light oversize loads, to fifteen degrees for heavier oversize burdens requiring faster travel rates.

The straight-line motion of the TEXAS SHAKER is generated by a pair of counter-rotating unbalanced shafts, coupled together with a pair of helical gears. Their opposite rotation generates the straight-line inertia force which, applied to the screen box structure, causes it to move in reaction.



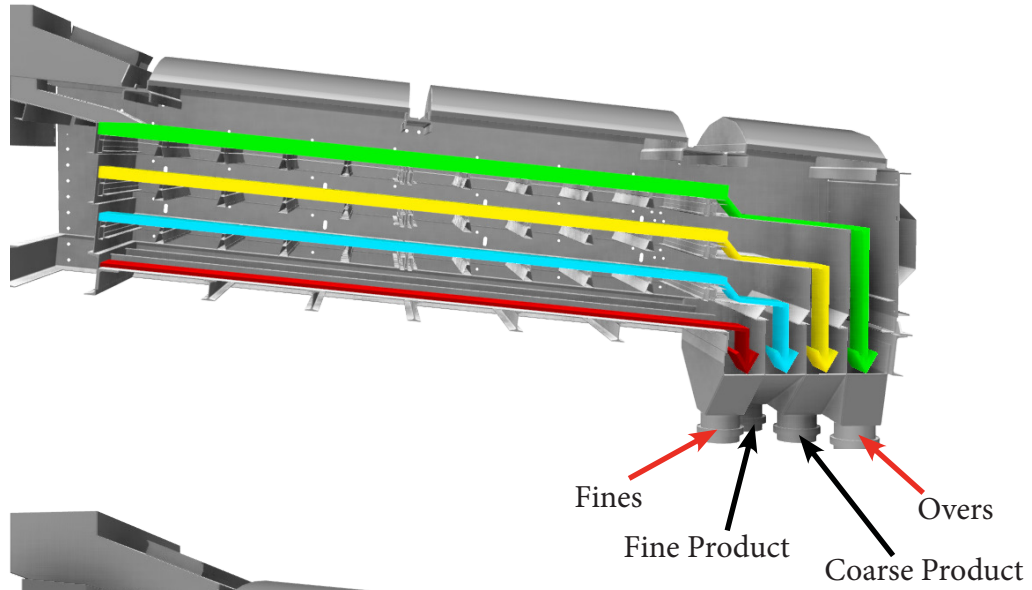
The constant change in velocity and direction of the screening surface creates a shuffling effect in the material bed that promotes stratification and screening. It also intensifies the action of the cleaning balls, whose impact against the underside of the screen not only prevents blinding, but also applies local agitation to assist in stratification. The positive conveying action (40 fpm on 6 degree slope) moves oversize bed at constant velocity preventing uneven buildup on the screen.

The TEXAS SHAKER is best for screening dry granular materials up to about 1” screen opening. It is available in arrangement for 1-4 cutpoints in one machine. TEXAS SHAKER models are offered in a variety of sizes ranging from 3 x 6 single-deck to 8 x 10 ten-deck, with up to 800 square feet of screening area in a single machine.

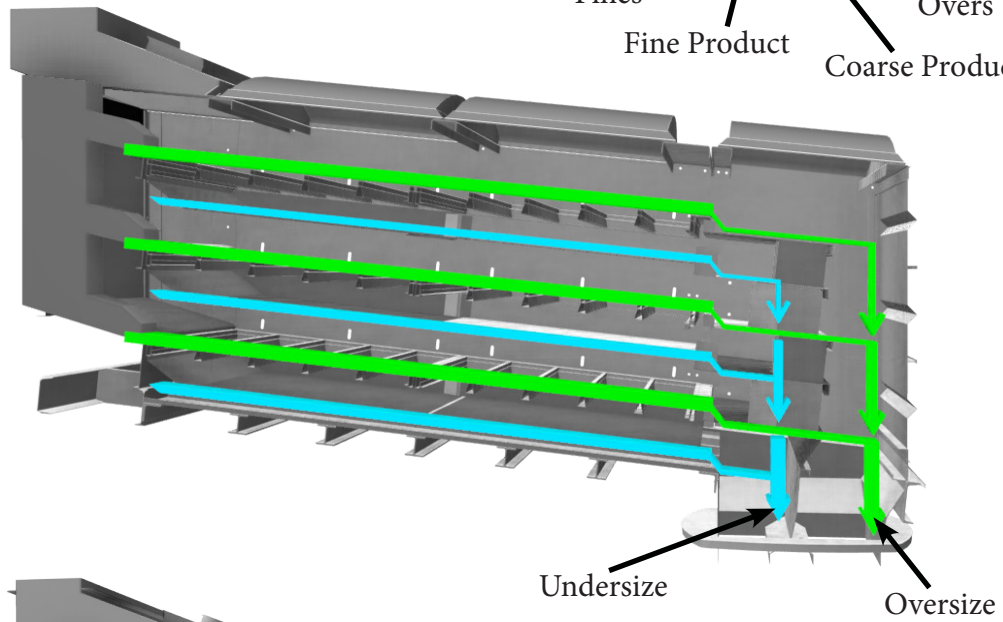
Today, the TEXAS SHAKER is at work across a broad range of industries, screening a wide variety of products including almonds, various grains, salt, limestone and potash.

With a variety of design arrangements (three examples shown below), the TEXAS SHAKER is built to meet your specific processing objectives.

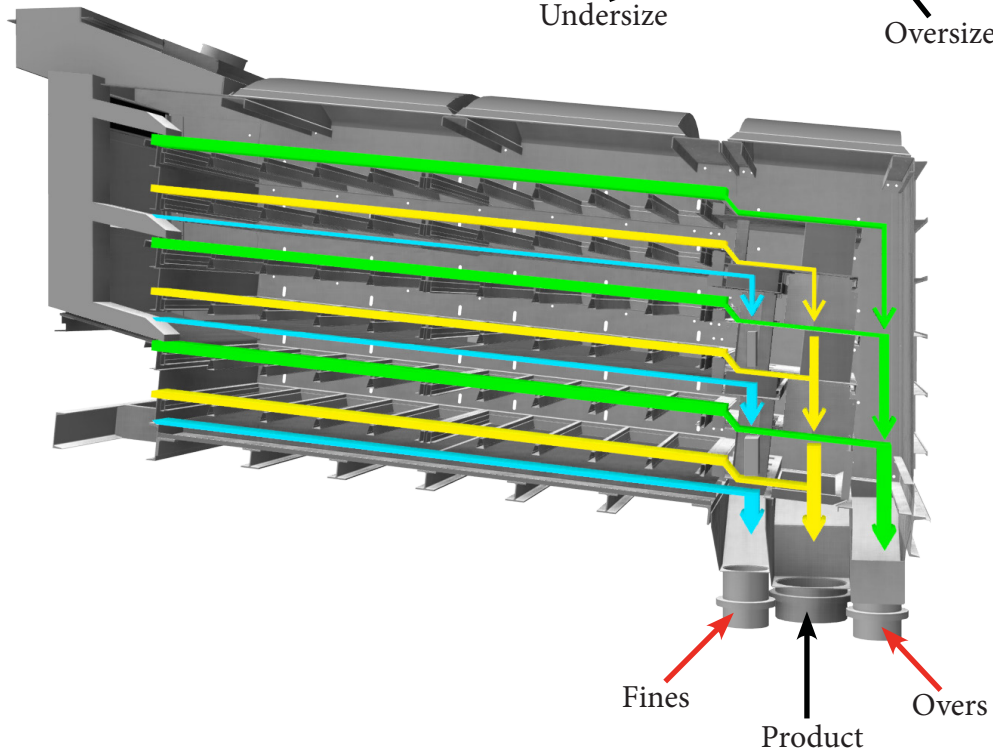
**3-Deck Series Flow**



**3-Deck Parallel Flow**



**6-Deck Series/Parallel Flow**

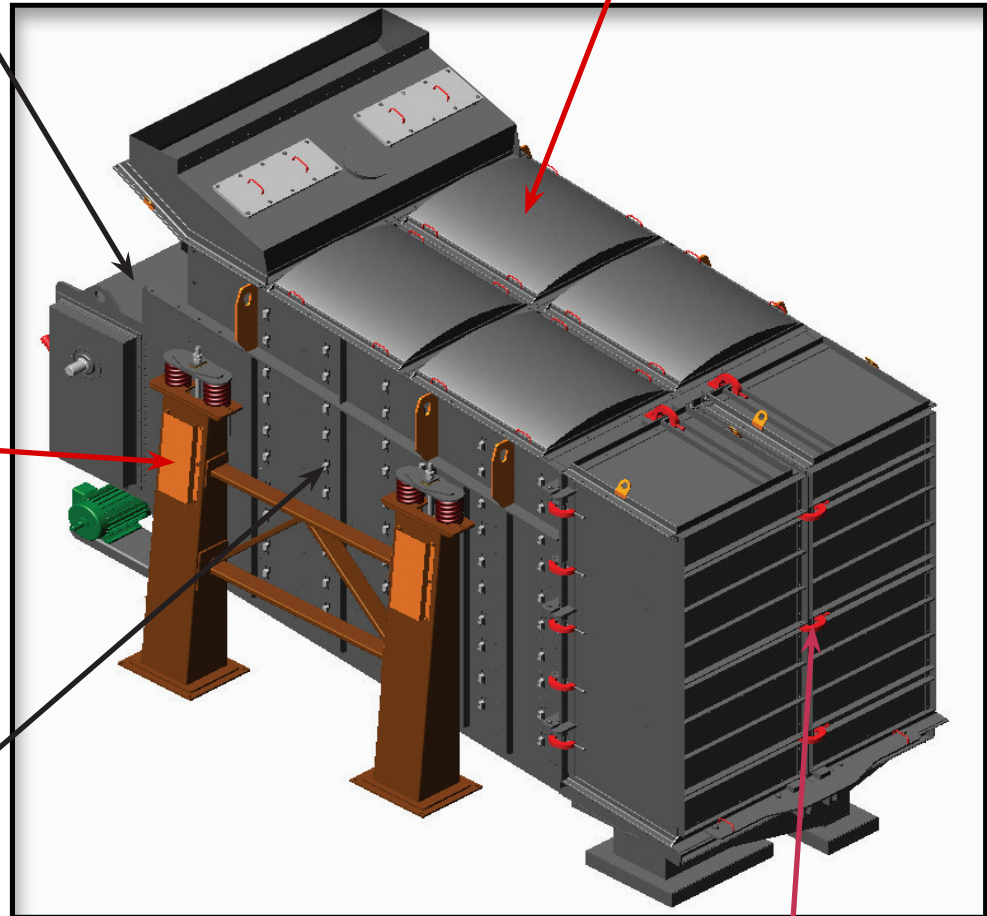


Externally mounted drive module, comprising a self-balancing system with two unbalanced, counter-rotating rotors, creating the straight-line oscillating motion. The drive module is powered by an electric motor typically in the size of 5-30 HP.

The standard TEXAS SHAKER is totally enclosed and commercially dust-tight. Ventilation connections are available.

The Texas Shaker can be base mounted or cable suspended. Base mounted, the Pendulink high-efficiency suspension reduces vibration transmissibility to less than 1.5%.

The Hammer Blocks help in easy screen removal as the hold down bar inside the screen box will be lifted from the screen decks by applying pressure on the blocks from the outside.



Aspiration can be incorporated in a Texas Shaker cleaning system. A full-width cross flow aspirator can be added ahead of the feed box or underneath the discharge spout.

The Texas Shaker offers three options to get easy and fast access to the screens for inspection and screen change. The discharge module can be swung to the sides (hinged on both sides for 8' wide models, hinged on one side for smaller machines), lifted up (one piece for all models) or detached and set aside (as one piece for all models).

The material enters the TEXAS SHAKER through the Feed Box. Design elements in the feed box and optional in the chutework above, help with the equal distribution of material over the width of the screen. Two-piece dust control Boots, connected between the Feed Box (and the discharge spouts) and neighboring - non-vibrating - chutework complete the dust control circle.

All sliding surfaces, such as the feed box, feed cups and discharge module, can be equipped with abrasion resistant liners (abrasion resistant steel plates, UHMW liners or ceramic tiles) for the processing of very abrasive materials.

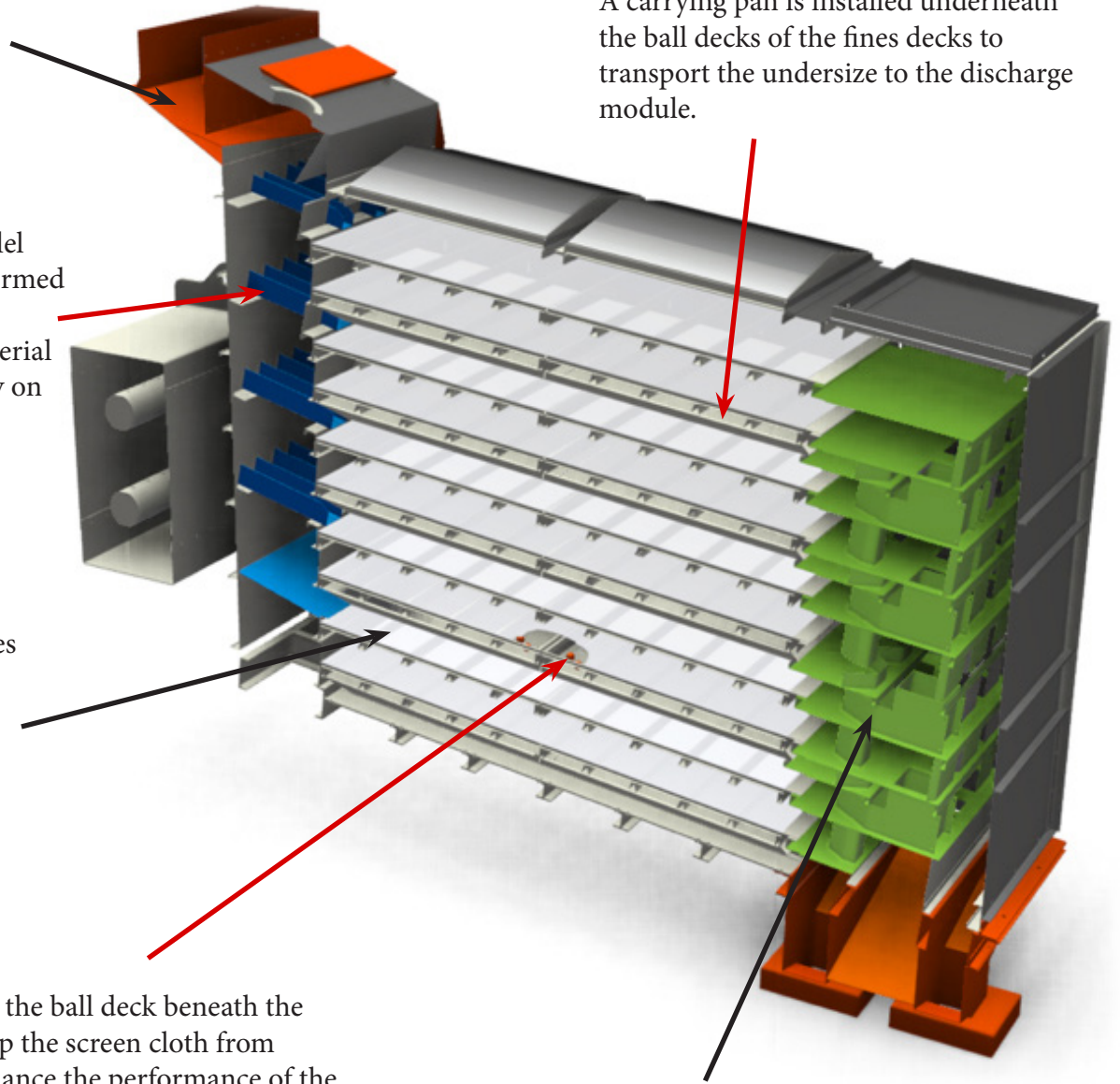
In parallel and series-parallel units, an arrangement of formed channels, the "Feed Cups", intersect the incoming material stream and divert it equally on the parallel decks.

Lightweight screen frames are separate from ball decks to allow for easy screen change. Screen cloth can be woven wire (mesh or slotted) or perforated punch plate.

Cleaning balls in the ball deck beneath the screen frame keep the screen cloth from blinding and enhance the performance of the screening process. Options for cleaning balls are gum rubber or polyurethane balls for ambient temperature and silicone balls or wire form balls for elevated temperatures.

A carrying pan is installed underneath the ball decks of the fines decks to transport the undersize to the discharge module.

In the discharge module, a system of channels combines the parallel material streams and directs them to the corresponding discharge spout.





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