EVERYTHING YOU NEED TO KNOW

TremiFlo Shaker Table

DESIGNED AND MANUFACTURED BY KFP RAIL

TremiFlo Shaker Table Installation Guide

Safety First

Please review these safety and compliance requirements before installing or servicing KFP mining equipment. Failure to follow site procedures or equipment warnings can cause serious injury, electrical shock, or damage to the machinery.

Electrical Safety

Before any electrical work, apply lockout/tagout and verify isolation. Use only certified, grounded circuits and qualified electricians for wiring and testing.

Mechanical Hazards

Never touch the belts, springs or pully's when the table is in operation
TremiFlo's deck is surronded by the steel frame to avoid people from touching/ leaning on the deck

PPE

Minimum required PPE: hard hat, safety glasses, steel-toe boots. Please adhere to the site PPE rules and regulations. Use additional PPE per site risk assessment.

Environmental

TremiFlo Shaker Tables are to be utilised under cover of a rook in order to avoid direct sunlight being cast onto the mat. Ensure adequate lighting for all work areas to preserve visibility and safety.

Regulatory

Comply with MSHA/OSHA or applicable local mining regulations and obtain any site-specific permits before starting work. Maintain records of inspections and certifications.

Introduction to TremiFlo

The TremiFlo Shaker Table is designed to efficiently extract minerals through precise control of various operational parameters. This manual will guide you on how to operate the TremiFlo Shaker Table for optimal mineral extraction.

Key Features

- Rugged steel frame
- Light weight deck
- Specialized mining mat
- Independently valved stainless steel water manifold
- Single point linkage system
- 220L water reservoir
- Clean water pump
- IP66 rated VSD

Overview of key parameters

Feed Rate Control

While often not adjusted, feed rate significantly impacts extraction efficiency. Feeding material slowly enhances control over the desired mineral extraction. Overfeeding, however, may lead to riffle "packing," where minerals are lost due to crowded riffles on the specialized mining mat.

Deck Angle Control

Adjust the deck angle to control the gravity factor using the holes located on the linkage plate. Proper adjustment is crucial for optimizing mineral separation.

Water Flow Management

Utilize TremiFlo's independently valved manifold and flexible nozzle system to control water flow. This allows you to increase or decrease water flow or wash minerals in multiple directions, aiding in effective separation and movement across the deck.

Deck Speed Control

The deck speed is managed by a Variable Speed Drive (VSD). Turning the dial clockwise increases the frequency and shaking speed of the deck, aiding in mineral extraction. Adjust the stroke of the table using the bumper.

Installation

Important

TremiFlo Shaker Tables are to be set up and operated under roof and out of direct sunlight.

Foundation Preparation

1. Construct a 180mm reinforced concrete base
2. Drill a qty of 16 holes 18mm diameter.
3. Use M16 threaded bar, leveling nuts and chemical anchors to secure your TremiFlo Shaker Table frame to the concrete base

Frame & Leveling

1. Ensure all nut and bolts are tightly secured, especially after transport to site
2. Using your leveling nuts, ensure the beam that the rollers run on is level. We refer to this beam as the golden highway

Rollers

1. Make sure the rollers are free-moving and not overtightened.
2. The 3rd Roller located at the bottom acts as an anti-lift mechanism to prevent the deck from dislodging during transport. These 3rd rollers are also provided are spares for the customer.

Linkage & Manifold Positioning

1. Tighten the linkage to the linkage plate. The table is pre-set to a suitable starting angle for your operation.
2. Set the manifold approximately 200-250mm from the deck wall to nozzle tip. Tighten pipe clamps to secure position. Adjust the nozzles for optimal water direction once material runs.

Installation continued

Power Connection

1. TremiFlo's steel frame is designed to incorporate housing and elevating as much of its power connections and electrical components as possible.
2. Confirm electrical supply characteristics (voltage, frequency, and short-circuit current rating) and coordinate with site electrical team.

Final Checks

1. Perform a final site inspection: check for obstructions, and ensure PPE is worn at all times when on site.

2. Establish exclusion zones and signage, confirm emergency access, and notify operations and safety teams prior to operating any machinery on site

Handover

Please note that KFP offers training at their fabrication premises in Johannesburg. Should you have any hesitation with the set up of your TremiFlo Shaker Table, please feel free to get hold of KFP Rail via email/WhatsApp video call. Matts number +2783 792 2039

Setup & Operation

Power & Speed

1. Turn on the Isolator switch clockwise to power the unit.
2. Position the middle switch to the right; ensure all hands are clear from the deck.
3. Adjust the VSD volume knob clockwise to an initial setting of approximately 43-48 Hz for the deck's shaking frequency.

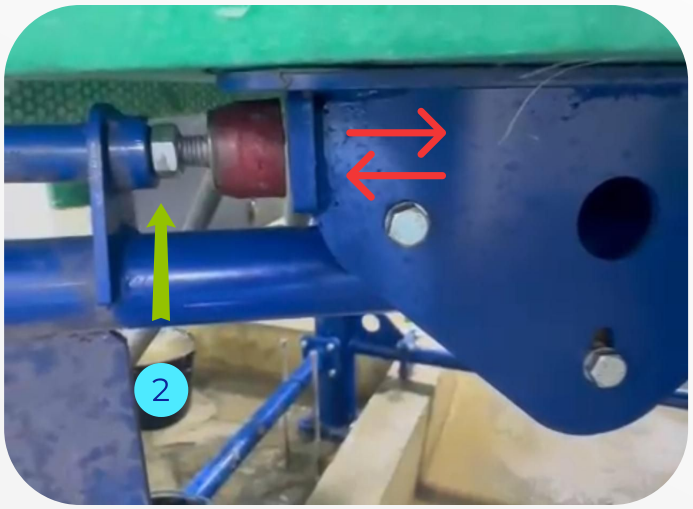
Setting your Deck

1. If the spanner doesn't move optimally, set VSD to about 45 Hz.
2. Use a 24 spanner to adjust the bumper while the table is in motion. Have your assistant place another spanner on riffle no. 5. Adjust the bumper until the spanner moves effectively.

Setup & Operation

Adjusting the Bumper

1. If the spanner doesn't move optimally, set VSD to about 45 Hz.
2. Use a 24 spanner to adjust the bumper while the table is in motion. Have your assistant place another spanner on riffle no. 5. Adjust the bumper until the spanner moves effectively.



Fine Tuning for Efficiency

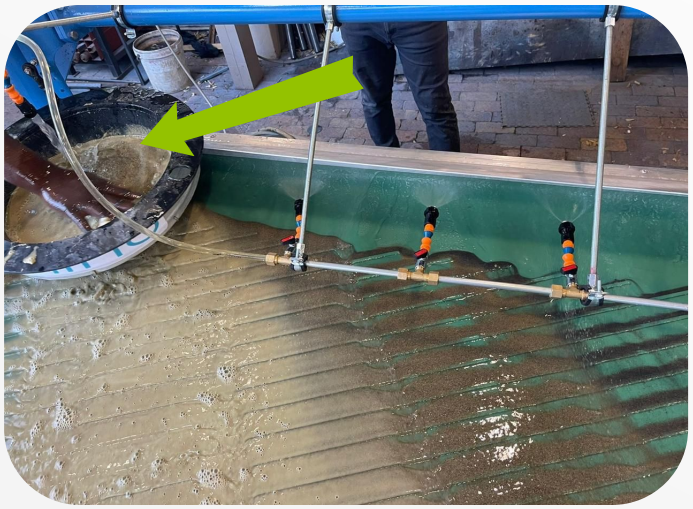
Communicate with your assistant for small VSD/ Bumper adjustments while timing the spanner's travel. Aim for the fastest movement for optimal operation before feeding material.

Setup & Operation

Feeding the Table

1. Your assistant should feed damp material consistently into the sieve. Feed more material as soon as the exposed TremiFlo mat appears.

2. Tip a heavier flow is usually required here. Remove the white nozzle and increase the flow using the valve.



Monitor & Adjust

Stand on the manifold side to observe mineral separation.

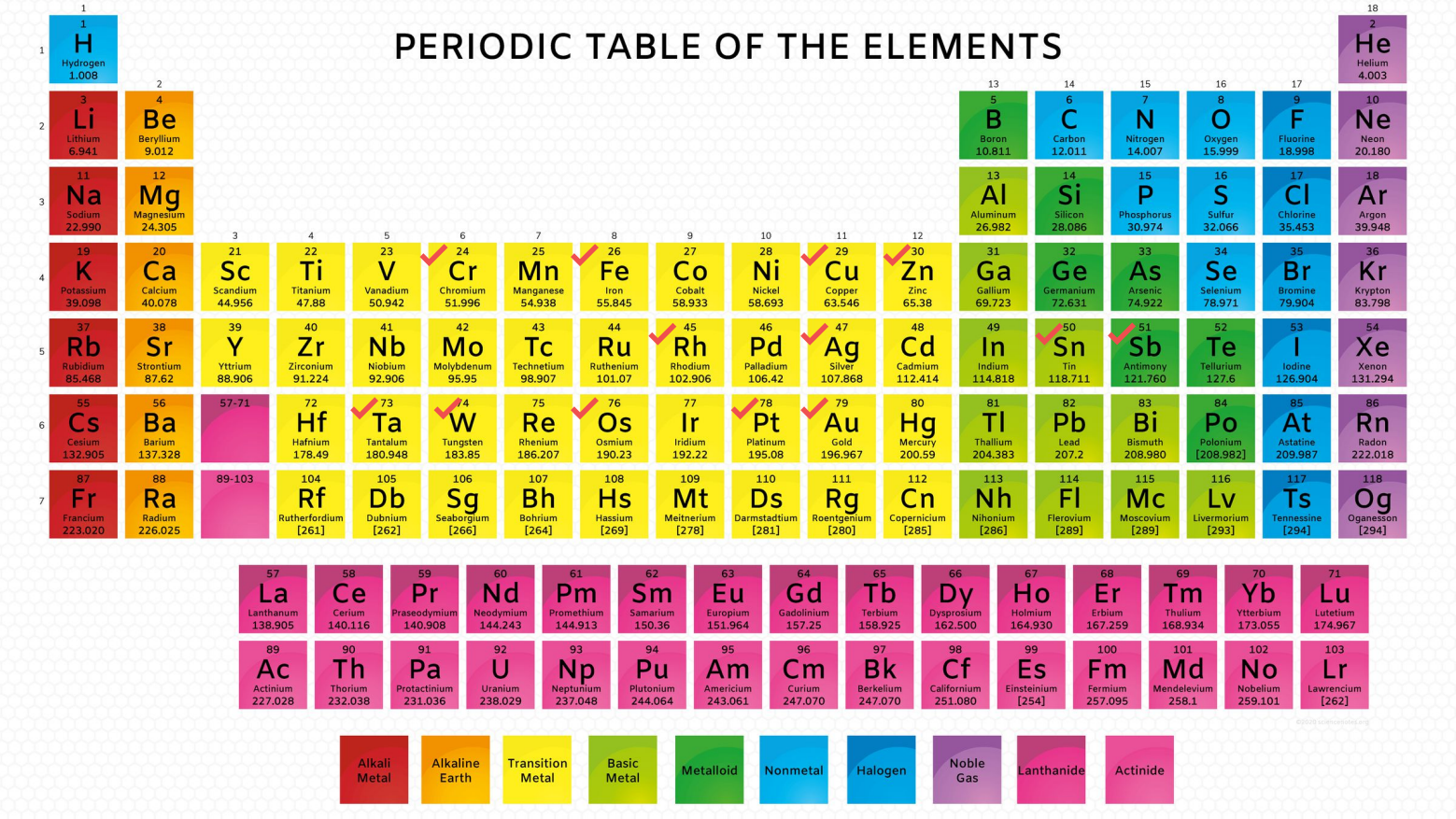
Adjust water flow using the valves and direct nozzles left/right based on observed needs for more or less water.

What Minerals can we extract?

Gravity Separation

Shaker tables are versatile tools used in the mining industry to extract a wide variety of minerals by exploiting differences in their relative densities. Here are some common minerals that can be extracted using shaker tables.

We as manufacturers promote a demo run of your sample at our fabrication facility to test and see how the mineral separates.



Book your appointment with Matt or Craig

Email: matt@kfprail.co.za

Call: +2783 792 2039

TremiFlo Table Banks

Table Banks increase throughput

Elevated structure allows for a gravitational advantage to capture and move minerals to other catchment areas