

EVERYTHING YOU NEED TO
KNOW

TremiFlo Shaker Table

DESIGNED AND
MANUFACTURED BY KFP RAIL



TremiFlo Shaker Table Installation Guide

- 01 Safety
- 02 Introduction
- 03 Installation
- 04 Setup & Operation
- 05 Periodic Table
- 06 Interconnection & Collective Impact
- 07 Installation



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 pulley's when the table is in operation
TremiFlo's deck is surrounded 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 roof 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 as 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

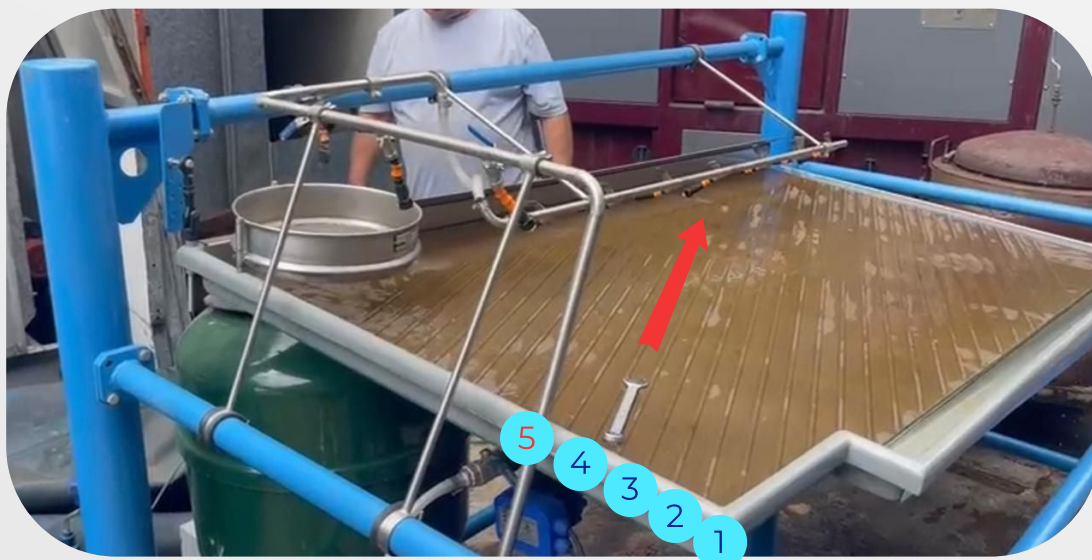
Power & Speed

- 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

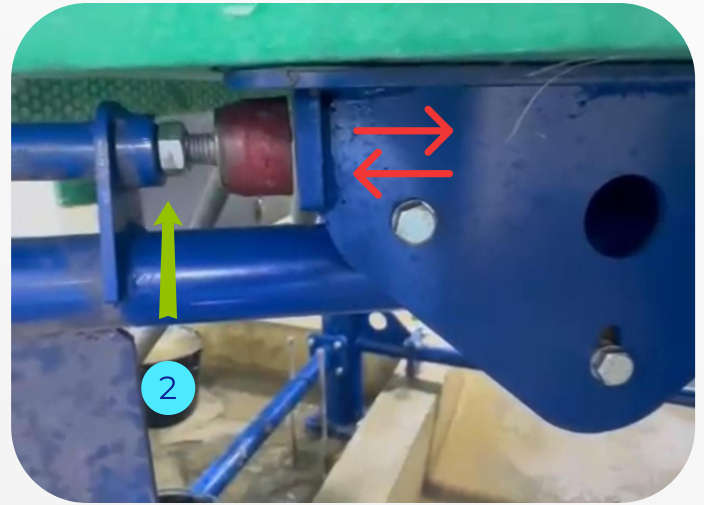
- 1 If the spanner doesn't move optimally, set VSD to about 45 Hz.
- 2 Use a 24 spanner to adjust the bumper while the table is in motion. Have your assistant place another spanner on raffle no. 5. Adjust the bumper until the spanner moves effectively.



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 raffle no. 5. Adjust the bumper until the spanner moves effectively.



Fine Tuning for Efficiency

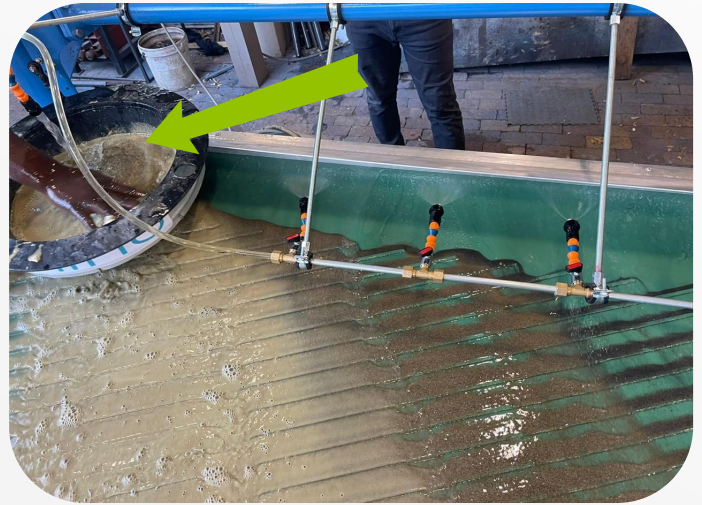
Communicate with your assistant for small VSD/ Bumper adjustments while timing the spanner's travel. Aim for the fastest movement for optimal operation before feeding material.



Setup & Operation

Feeding the Table

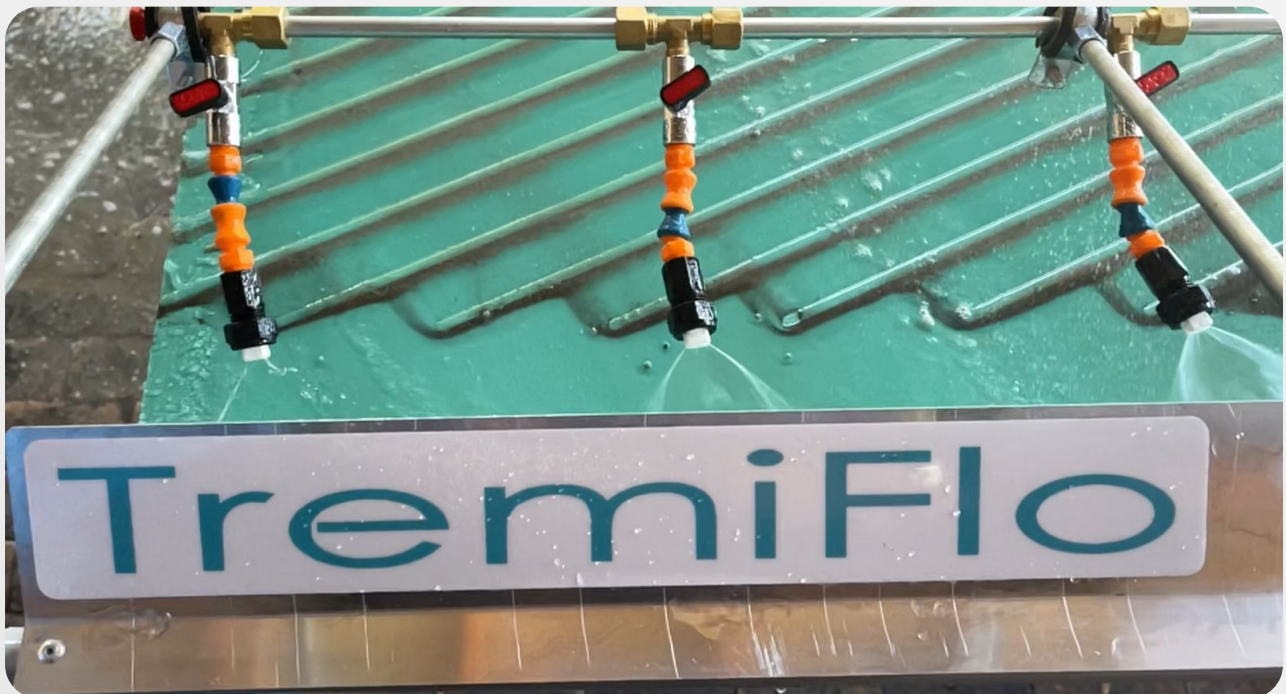
- 1 Your assistant should feed damp material consistently into the sieve. Feed more material as soon as the exposed TremiFlo mat appears.
- 2 Tip a heavier flow is usually required here. Remove the white nozzle and increase the flow using the valve.



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.

PERIODIC TABLE OF THE ELEMENTS

1 H Hydrogen 1.008	2 He Helium 4.003																
3 Li Lithium 6.941	4 Be Beryllium 9.012	5 B Boron 10.811	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180										
11 Na Sodium 22.990	12 Mg Magnesium 24.305	13 Al Aluminum 26.982	14 Si Silicon 28.086	15 P Phosphorus 30.974	16 S Sulfur 32.066	17 Cl Chlorine 35.453	18 Ar Argon 39.948										
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.88	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.631	33 As Arsenic 74.922	34 Se Selenium 78.971	35 Br Bromine 79.904	36 Kr Krypton 83.798
37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.95	43 Tc Technetium 98.907	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.906	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.414	49 In Indium 114.818	50 Sn Tin 118.711	51 Sb Antimony 121.760	52 Te Tellurium 127.6	53 I Iodine 126.904	54 Xe Xenon 131.294
55 Cs Cesium 132.905	56 Ba Barium 137.328	57-71 Lanthanides	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.85	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.967	80 Hg Mercury 200.59	81 Tl Thallium 204.383	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [208.982]	85 At Astatine 209.987	86 Rn Radon 222.018
87 Fr Francium 223.020	88 Ra Radium 226.025	89-103 Actinides	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [266]	107 Bh Bohrium [264]	108 Hs Hassium [269]	109 Mt Meitnerium [278]	110 Ds Darmstadtium [281]	111 Rg Roentgenium [280]	112 Cn Copernicium [285]	113 Nh Nihonium [286]	114 Fl Flerovium [289]	115 Mc Moscovium [289]	116 Lv Livermorium [293]	117 Ts Tennessine [294]	118 Og Oganesson [294]
57 La Lanthanum 138.905	58 Ce Cerium 140.116	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.243	61 Pm Promethium 144.913	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.500	67 Ho Holmium 164.930	68 Er Erbium 167.259	69 Tm Thulium 168.934	70 Yb Ytterbium 173.055	71 Lu Lutetium 174.967			
89 Ac Actinium 227.028	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.029	93 Np Neptunium 237.048	94 Pu Plutonium 244.064	95 Am Americium 243.061	96 Cm Curium 247.070	97 Bk Berkelium 247.070	98 Cf Californium 251.080	99 Es Einsteinium [254]	100 Fm Fermium 257.095	101 Md Mendelevium 258.1	102 No Nobelium 259.101	103 Lr Lawrencium [262]			

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Book your appointment with Matt or Craig

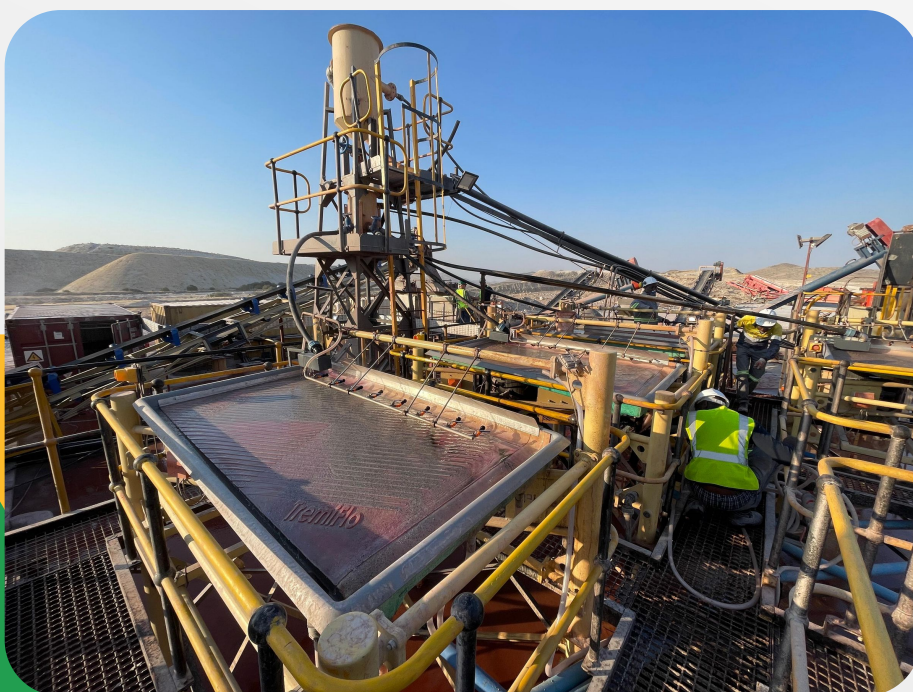
Email: matt@kfprail.co.za

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