## Research, Manufacturing and Business Together



### RMB KNOVATECH PVT LTD



### Concept to Delivery...

# RMB KNOVATECH RIPPLE FLOW VIBRATING SCREEN





#### **FEATURES:-**

#### 1. Frame:

The vibrating frame has been specially designed To ensure maximum ruggedness and rigidity. Simple construction allows complete dismantling.

- Two side plates of heavy duty design.
- Deck frames bolted to the side plates with high carbon high tensile bolts & consists of cross —members & deck bars.
- Shaft casing made up of extra heavy duty seamless pipe.
- With machined flanges bolted to the side plates.
- Ensuring dual function protecting shaft & serving as structural member of the live frame casing is also provided with rubber lagging along the entire length.
- Tensioning clamp plates run the entire length of the screen on both sides. They serve two purposes
- To hold the screen cloth in proper tension square neck bolt with clamping plate is positioned on side wall. Which helps spread materials across the full Width of the screen for better screening.
- To make screen cloth replacement easier & Simpler.

#### 2. Easy Coil - Spring Replacement:

Modular pivoted spring mounting assembly for easy replacement and two-degree screen box inclination change.

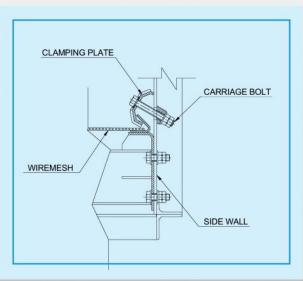
#### 3. Exclusive Motor Base:

 Heavy-duty, Pivoted motor base ensure isolation of vibration from oscillator to motor.

#### 4. Screening Surfaces:

The frames of this type of screens are designed to incorporate different types of screening surfaces, such as woven wire cloth perforated plates, rubber decks, polyurethane decks. The type of deck surface is selected considering the duty, materials, creening sizes & the user's preference.





### Value without Compromise....

#### 5. Vibrating Unit: Made up of:

- One-piece high strength centric hallow shaft designed for minimum deflection & maximum bearing life.
- Two heavy duty self aligning double row spherical roller bearings specially designed for vibrating screen with a high loading capacity.
  - They are placed in flanged housings allowing easy installation in the bearing boxes of the frame.
- A set of rotating labyrinth seals provides rigorous protection against moisture, dust & other harmful elements. Bearing is lubricated with grease introduced under pressure by a grease gun.

#### **BASIC ADVANTAGES:-**

- Sharp Accurate Sizing: Four factors guarantee the efficiency of the ripple flow screen
  - a. Stroke Adjustability
  - b. Speed Adjustability
  - c. Uniformity of Stroke
  - d. Inclination adjustability

#### **High Output:**

- a. Every square meter of the Screen is "alive "for highest capacity.
- b. Uniform motion throughout produces an accurately sized product.

#### Circular - Throw:

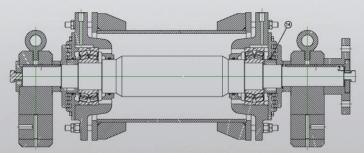
a. A simple two – bearing oscillator produces true circular throw. This causes material to rotate many times as it crosses the screen cloth.

#### Adjustable Stroke:

a. RIPPLE FLOW SCREEN are supplied with pre – set stroke as required by specific service applications. If a change in operating Conditions is required in the Field, the stroke is adjusted easily by adding or removing Insert mass.

#### Simple Maintenance:

- a. Screen cloth replacement easy and simple.
- b. All permanent connections are welded and maintenance free.
- c. All bolted connection are with high carbon high tensile bolts.
- d. Modular construction.
- e. Flange assembly slip fit on the shaft permit easy bearing replacement.



OSCILLATOR CROSS SECTION





Washing Vibrating Screen



Vibrating Screen with Dual Oscillator



Circular motion Ripple flow Oscillator

### Concept to Delivery...

### RMB KNOVATECH GRIZZLY FEEDER



RMB Knovatech Vibrating Grizzly Feeder reduces maintenance cost and lower capital expenditure by eliminating Feeder and Grizzly.

- Scalping and feeding in a single unit.
- Grizzly Feeder components include:
  - Vibrating Body
  - Conveying Trough with wear liner
  - Electro-mechanical Vibrating Motor
  - Rubber Spring Units for better isolation
  - Heavy duty Structures
  - Feeding Mouth
  - Grizzly Bar with wear resistant material
  - Heavy duty Wire Mesh
- Tapered Opening of grizzly bar to prevent material plugged between the bars
- A Grizzly Feeder performs following important functions :
  - Takes the shock of heavy dumped load without affecting the superstructure
  - Regulate feed rate to the plant
  - The Grizzly section separates material for product sizing and remove unwanted fines and bypasses smaller material around the crusher

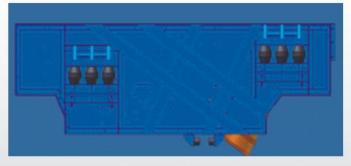








Second deck of Grizzly Feeder remove muck

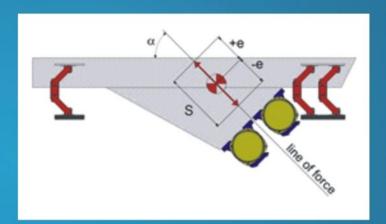


Compare to other conveying means vibrating grizzly feeders with unbalance motors have low energy consumption. Trough is provide with wear resistant liner. Unbalance Motors provided with the feeder are robust, reliable in operation have a high loading capacity and with least maintenance. They have generously dimensioned special heavy vibration proof winding, totally enclosed with IP-55 degree of protection and are suitable for weather proof outdoor.

### Value without Compromise....

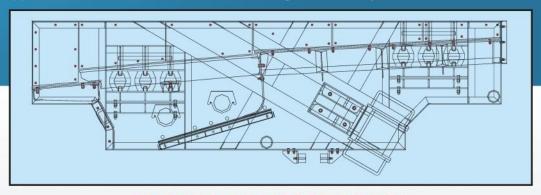


### PRINCIPLE OF OPERATION





The oscillating motion of the Feeder is imparted by the unbalance masses mounted on the extended shaft of the two Motor rotating at the same speed but in opposite direction. These motors are placed symmetrically about a line at right angle to the frame. As the resultant force due to unbalance masses passes through this line, it is called drive line. The total displacement in either direction is called "stroke" As it may be observed that at any instant of 360 rotation of the motors, individual motors are producing forces with components along the drive line and also at right angle to it. The forces at right angle to the drive line produced, are at opposite directions and cancel each other, leaving the forces only in the direction of the drive line.



CROSS SECTIONAL VIEW OF GRIZZLY FEEDER

MODEL AND SPECIFICATION OF GRIZZLY FEEDER								
MODEL	WIDTH x LENGTH (MM)	CAPACITY (TPH)*	UNBALNCE MOTOR KW x RMP x QTY.	VIBRATING ACCELERATION (G Force)		APP. W	T.(Kg) STATIC	
KGF 80/350-2D	800X1500	50-100	2.5 KW x1000 RPM x2 Nos.		3.0 <g<5.0< td=""><td>2850</td><td>800</td></g<5.0<>	2850	800	
KGF100/400-2D	1000X4000	100-150	3.8 KWx1000 RPMx2 Nos.			3650	1000	
KGF 120/450-2D	1200X4500	150-250	5.5 KWx1000 RPMx2 Nos.	Linear		4450	1200	
KGF 140/550-B	1400X5500	250-350	6.5 KWx1000 RPMx2 Nos.			6050	1500	

Note- "\*" marked capacity is subject to bulk density 1.6 Ton /Cu M and hardness not more than 7 on MOHS.

### RMB KNOVATECH VIBRATING FEEDER







#### **APPLICATIONS:**

- \* METALLURGICAL PLANT STEEL, DRI, PELLET, SPONGE IRON
- \* MINING COAL, ORE AND MINERAL PROCESSING
- \* CEMENT
- \* THERMAL POWER
- \* CHEMICALS AND PHARMACEUTICALS
- \* ENGINEERING & MATERIAL
- \* HANDLING SUGAR AND FOOD PROCESSING
- \* AGGREGATES

#### VIBRATING FEEDER

RMB KNOVATECH Vibrating Feeders with unbalance drives are economical conveying means for all bulk material and are used where products are to be fed either Continuously or batch for instance –

- \* Discharging bulk materials form bins.
- \* Feeding crushers, mixers, furnaces & scales.
- \* Feeding conveyor belts, bucket elevators,
- \* Vibratory screens, loading & sorting plants.

Compare to other conveying means vibrating feeders with unbalance motors have low energy consumption. Trough is provided with wear resistant liners and they do not influence the quality and character of the product they handle. Unbalance Motors provided with the feeder are robust, reliable in operation have a high loading capacity and with least maintenance. They have generously dimensioned special heavy vibration proof winding, totally enclosed with IP-55 degree of protection and are suitable for weather proof outdoor.

#### UNBLANCE DRIVE

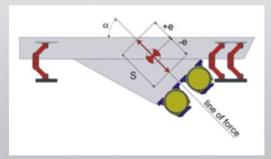
The feeder are driven by two heavy duty unbalance motors which are firmly fixed on the body.

- ·Simple to connect and operate.
- The Feeders with unbalance motors operate with linear oscillations as explained in the principle of operation. The unbalance forces can be altered either by displacement, removing or by adding unbalance weights.

#### PRINCIPLE OF OPERATION

The oscillating motion of the Feeder is imparted by the unbalance masses mounted on the extended shaft of the two Motor rotating at the same speed but in opposite direction. These motors are placed symmetrically about a line at right angle to the frame. As the resultant force due to unbalance masses passes through this line, it is called drive line. The total displacement in either direction is called "stroke" As it may be observed that at any instant of 360 rotation of the motors, individual motors are producing forces with components along the drive line and also at right angle to it. The forces at right angle to the drive line produced, are at opposite directions and cancel each other, leaving the forces only in the direction of the drive line.





### Value without Compromise....

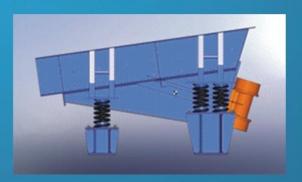


#### **GENERAL**

In industries where bulk materials, solids and powers are processed, RMB KNOVATECH Vibrating feeder is synonymous with high quality and efficiency. RMB KNOVATECH Vibrating Screens are rugged and designed for a long lifetime and minimum operating cost with low maintenance. Due to wide choice of available RMB KNOVATECH vibratory units. It is possible to select and deliver the most efficient and advantageous feeder for each particular application. The correct drive selection is very important for constant efficiency, long life low operating cost and highest possible output. The small to medium size vibro feeders are provided with unbalance motor drive unit. Two unbalance motor mounted on the Vibro feeder Structure produces liner vibrations.



All feeders are dispatched only after satisfactory trial run at RMB KNOVATECH works

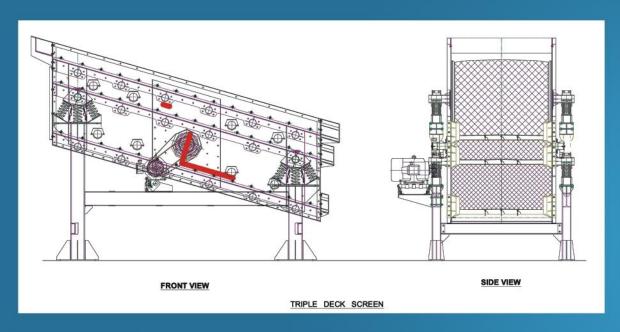




MODEL AND SPECIFICATION OF VIBRATING FEEDER								
	WIDTH x CAPACITY	UNBALNCE	VIBRATING		APP. WT.(Kg)			
MODEL	LENGTH (MM)	(TPH)*	MOTOR KWX RMPX QTY.	TYPE	ACCELERATION (G Force)	VIBRATING	STATIC	
KVF 80/160-B	800X1600	80-150	0.64 KWX1500 RPMX2 Nos		3.0 <g<5.0< td=""><td>550</td><td>250</td></g<5.0<>	550	250	
KVF100/180-B	1000X1800	150-200	0.7 KWX1500 RPMX2 Nos.			750	350	
KVF 120/200-B	1200X2000	200-300	1.13 KWX1500 RPMX2 Nos.	Linear		1050	450	
KVF 140/240-B	1400X2400	300-400	1.57 KWX1500 RPMX2 Nos.			1450	750	

Note- "\*" marked capacity is subject to bulk density 1.6 Ton /Cu M and hardness not more than 7 on MOHS.

### Professional Creats Brand...



Model	W x L (mm)	Surface (M <sup>2</sup> )	Deck (Nos.)	Power (KW)	Vibrating Type	Acceleration (G Force)	App. Wt. (Kg.)
KRF 120/350 – 2D	1200 x 3500	4	2	5.5			2000
KRF 120/350 – 3D	1200 x 3500	4	3	7.5			2500
KRF 150/480 – 2D	1500 x 4800	7	2	9.3			4500
KRF 150/480 – 3D	1500 x 4800	7	3	15	빌		5500
KRF 150/500 – 4D	1500 x 5000	7.5	4	18.5	J AB	<u>p</u>	5800
KRF 180/450 – 4D	1800 x 4500	8	4	22	MOTION RIPPLE FLOW	3 and an 5	6500
KRF 180/500 – 2D	1800 x 5000	9	2	18.5	MO-	More Than 3 Less Than	6000
KRF 180/500 – 3D	1800 x 5000	9	3	22		ore Th	6500
KRF 200/600 – 2D	2000 x 6000	12	2	22	CIRCULAR	Ā	6800
KRF 200/600 – 3D	2000 x 6000	12	3	30	] Sirc		7200
KRF 200/600 – 4D	2000 x 6000	12	4	30		8800	
KRF 240/650 – 2D	2400 x 6500	15	2	30			8200
KRF 240/650 – 3D	2400 x 6500	15	3	37			11000



#### RMB KNOVATECH PVT LTD

**VISION**: - RMB Knovatech shall be a leading Engineering Company, totally dedicated to timely completion of project while ensuring quality and total customer satisfaction.

**MISSION:** - RMB Knovatech is a team committed to excellence in design & Engineering, Manufacturing, Service and project implementation.

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