Assembly of Vibrating Funnel Distribution Box



Overview

CN202962829U The utility model content The purpose of this utility model is to provide a kind of funnel for the material screening and filtering, can vibra.

Key Takeaways

A vibrating funnel distribution box is assembled using a motor-driven eccentric mechanism, funnel body, supports, and funnel bases to ensure uniform material flow through controlled vibration.

Core Components

Funnel Body: The main container for material, typically conical, designed to direct material downward efficiently. It is mounted above the funnel bases and supports the distribution of material into downstream equipment. Motor and Motor Box: A motor housed in a motor box drives the vibration.

The motor is connected to eccentric gears or wheels, which convert rotational motion into vibratory motion.

Eccentric Gears/

Wheels: Positioned below the funnel bases, these components create the vibration. The motor rotates the driving wheel, which moves the eccentric shaft, causing the funnel body to vibrate. Funnel Bases and Supports: Funnel bases are symmetrically arranged under the funnel body to stabilize it.

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Supports are placed between the eccentric wheels and the motor box to maintain alignment and absorb vibration. Drive Mechanism: The motor drives the eccentric wheels via a driving belt or coaxial connection, transmitting motion to the funnel body. This ensures consistent vibration amplitude and frequency for uniform material flow.

Assembly Process

Mount the motor inside the motor box and secure it to the supporting frame. Attach eccentric wheels to the motor drive shaft using the driving belt or direct coupling. Position funnel bases symmetrically under the funnel body and connect them to the eccentric shafts.

Install supports between the eccentric wheels and the motor box to stabilize the assembly. Ensure all connections are aligned to allow free vibration without obstruction. Test the vibration amplitude and frequency, adjusting the motor speed or eccentric weight as needed for uniform material distribution.

Operational Integration

Once assembled, the vibrating funnel distribution box can be connected to downstream equipment such as sample dividers, mills, mixers, or assembly lines. The vibration ensures that materials, whether fine powders or coarse granules, flow evenly through the funnel into the distribution channels. Flow rate and vibration amplitude can be controlled via microprocessor-based control units for precise feeding.

Advantages

Uniform material distribution for consistent downstream processing. Reduced clogging and caking due to vibration. Adjustable flow rate and vibration amplitude for different materials.

Simple structure and low maintenance compared to complex vibratory screens. This assembly ensures that the vibrating funnel distribution box operates efficiently, providing reliable and controlled material flow for industrial or laboratory applications.

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Article Content

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Through vibration of a channel of stainless steel, free-flowing material is conveyed out of a funnel and to the open end of the channel in a uniform stream. The rate

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WEIGH STATION WITH A LINEAR VIBRATING FUNNEL AND A

The problem with 3D vibrators the forces move in all directions that causes the produce to spiral down a funnel reducing the speed the powder travels through a funnel into the loading cone. Another

What is a Bowl Feeder?

It consists of a bowl-shaped container containing the parts to be conveyed. These parts are moved and oriented by vibrations generated by a system of internal

Vibratory Feeder Bowls & Parts Feeders | Feeding Concepts Inc.

Our stainless steel vibratory feeder bowls handle a wide range of applications, from standard fastener feeding — screws, bolts, caps, nuts, washers, pins, springs, and O-rings — to complex parts with

Parts Feeder Combination Guide

Parts feeders can align scattered parts in order and convey them in a consistent posture. The device seems to be just a magic box, but as a matter of fact, it incorporates precision mechanisms. Aligning

, rotary sample divider,

1.1 Structure:HMK Rotary Sample Divider consists of divider, rotating funnels, vibrating assembly, sample cleaning device etc. Sample is easily and evenly divided into specific shares under

Vibrating Feeder Design

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The center dome is part of the box structure and functions as a pile activator or vibrating hopper bottom. The entire assembly is vibrated horizontally by the

Classification of vibrating feeding hoppers & How to choose the right ...

Classification of vibrating hopper for feeding workpieces By shape: The shape of the vibrating funnel directly affects how the workpiece moves and is classified. Below are the 3 most common types of

Vibrating feeder & Feeding systems

Distribution Screen Feeders Merge the functionalities of a vibrating screen feeder and distribution feeder. These distribute bulk material evenly across the sorting machine while pre-sorting smaller

Custom Hoppers & Funnels

Custom funnels with Yellow HMWPE (high molecular weight polyethylene) or Blue UHMWPE (ultra high molecular weight polyethylene) Yellow funnels have varying diameter sections joined together using

VibraTing Feeder Manual | FTM Machinery

Working andstructural principle characteristics GZD Vibrating feeder The GZD series vibrating feeder is made up by spring support, vibrating feeding box, vibrating motor, spring and motor support etc.

Build Distribution Boxes — Step-by-Step Assembly

This video shows our power cabinet assembly process on the factory floor. Watch technicians use an electric drill to fasten distribution-box components, inst...

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The invention relates to the technical field of vibrating funnels and discloses a hyperbolic movable vibrating funnel which comprises a vibrating straight-section funnel, a hyperbolic movable object

Syntron Material Handling

Syntron volumetric feeder machine designs include four basic components: a supply hopper, a hopper vibrator, a vibrating feeder, and the supporting frame. Supply hoppers are usually fabricated from

Vibrating hopper with spiral bowl: The optimal feeding

Advantages of vibrating funnel with spiral bowl In which industries are spiral bowl vibrating funnels "dominating"? Electronic components manufacturing:

Distribution of the piezo-transducers on the surface of

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Download scientific diagram | Distribution of the piezo-transducers on the surface of funnel from publication: Mu-synthesis based active robust vibration control of an

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