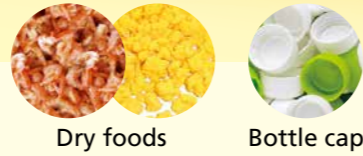


High Speed Volumetric Feeding by Original Vibrating Method

Dual Motion Parts Feeder for Foods

DM series

With original ellipse vibrating movement, dual motion parts feeder realized smooth and speedy material handling.



Dry foods

Bottle cap

Features


High speed volumetric feeding

Vertical stroke can be suppressed as much as possible, so handling material never jumps around. Therefore, most of materials will not lap over while handling.

Less damage to handling material with low noise

Handling materials won't be damaged by bouncing caused by vibration, and material moves as if sliding. Thus, the material transported quickly and quietly.



 For safe and reliable operation, it is essential to read the user's manual carefully before using this equipment.

We have a new slogan in Japan; "ECOing" a combination of "eco" and "ing". This is to promote eco-friendly technological development and manufacturing. Our ecological activities are of course not limited to Japan and practiced in many countries around the world.

 **SINFONIA** SINFONIA TECHNOLOGY CO., LTD.

Shiba NBF Tower, 1-30, Shibadaimon 1-chome, Minato-ku, Tokyo, 105-8564, Japan
TEL +81-3-5473-1864 FAX +81-3-5473-1845

SINFONIA TECHNOLOGY (THAILAND) CO., LTD. Bangkok Sales Office

12th Floor Room 1205, 319 Chamchuri Square Building, Phayathai Road, Pathumwan Bangkok Bangkok 10330
TEL +66-2160-5068 FAX +66-2160-5069

SINFONIA TECHNOLOGY (SINGAPORE) PTE. LTD.

96 Robinson Road, #13-02 SIF Building, Singapore 068899
TEL +65-6223-6122 FAX +65-6225-2729

PT. SINFONIA TECHNOLOGY INDONESIA

Graha Paramita 8th Floor Suite E Jl. Denpasar Raya Block D2 KAV. 8 Kuningan, Jakarta 12940 Indonesia
TEL +62-21-252-3606 FAX +62-21-252-3608

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For Food Manufacturing Line Vibrating Equipment



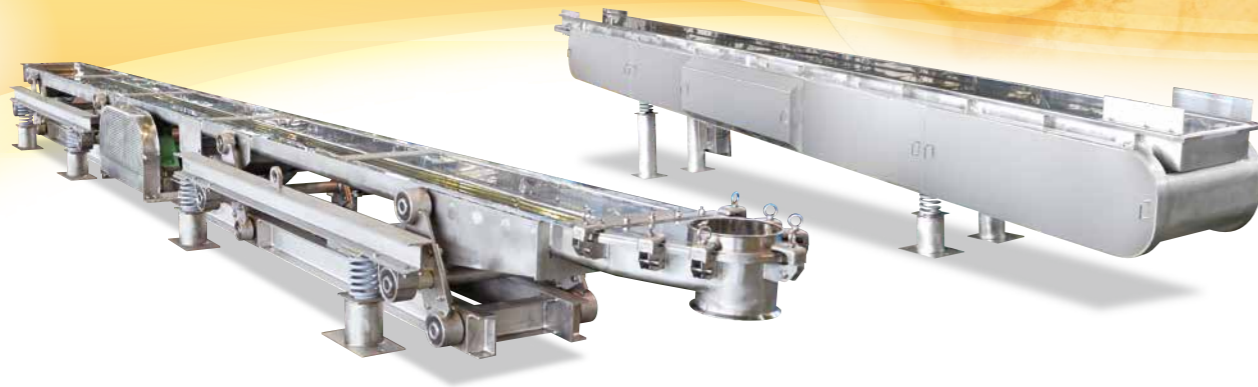
 **SINFONIA**
SINFONIA TECHNOLOGY CO., LTD.

Contributing Contamination Free Food Manufacturing Line

Very high standard safety is required at food manufacturing line. As a leading manufacture of bulk processing vibrating equipment, SINFONIA has been contributing for improvement of manufacturing efficiency and contamination free production by various solutions backed by accumulated experiences for a long time. By applying SINFONIA's vibration method, transporting materials and driving part will never touch. SINFONIA's vibrating equipment are capable filling various requirement such as contamination free covered trough, or providing all stainless made washable unit.



Examples of fully stainless steel made products



Washable feeder available



Water Resistant Electromagnetic Feeder

Capable to adherence prevention by embossing trough



Small Electromagnetic Feeder

Realizing even drying by fluidize material



Vibrating Dryer and Cooler System

Fulfilling various needs by providing rich vibrating solutions

Rubber Spring Vibrating Conveyor

This is low floor type and vibrating angle changeable. Because materials don't bounce while transporting by adjusting vibrating angle, picking process becomes very easy. Optional trough cover is available also.



P.3 >>>

Vibrating Dryer and Cooler System

Capable to dry and cool evenly regardless grain size and specific gravity because of vibrating transportation make the materials fluidized. By changing time to expose to hot and cool air through adjusting strokes, frequency, and atmosphere temperature, it is capable to providing the most suitable material quality.



P.7 >>>

Electromagnetic Vibrating Conveyor

Maintenance for this electromagnetic driving unit is very easy because conventionally consisted materials such as motors, bearings, rubbers are not used also, no deterioration caused by friction of machines itself.



P.3 >>>

Electromagnetic Feeder

This unit is for material feeding. Trough can be covered, so capable to prevent risk of contamination. Also the trough part could be made by stainless steel except driving part.



P.8 >>>

Low-height long conveyor



This feeder realized same length as conventional models while its height lowered drastically. It is suitable for factory which has only limited space. Moreover, cleaning becomes very easy by covering driving units. Thus, it is efficient for preventing contamination.

P.4 >>>

Water Resistant Electromagnetic Feeder

This is washable type feeder suitable for wet processes and frequently washed processes. Special coating for washable unit is available optionally.



P.9 >>>

Sliding Conveyor

Extremely quietly transporting materials by constant horizontal sliding movement caused by Linear motor. This unit is capable to changing forward and backward easily by controller.



P.5 >>>

Linear Feeder

Because stroke, and vibrating angle can be adjusted, most suitable vibration can be produced. Parallel and tandem installation is possible up on request.



P.10 >>>

Sliding Feeder

By shaking a trough horizontally as if materials slide, even breakable materials can be transported softly. Because overhang of its trough became 1.5 times longer than conventional model, it is more suitable for feeding to weigher.



P.6 >>>

Dual Motion Parts Feeder for Foods

By original ellipsoidal vibration movement, material can be voluntarily transported or feed speedily and smoothly without damage. You can get the most suitable vibration by easy to use controller.



P.11 >>>

Adjustable vibration angle low floor type

Rubber Spring Vibrating Conveyor

HRC type

This low floor type conveyor can be adjusted its vibrating angle for transporting material which was difficult for conventional units. Such as frame, and mounting legs, most of part could be made by stainless steel, and we can supply the most suitable specification for each food manufacturing lines. Rubber spring part could be covered in order to prevent contaminations.



Features

Adjustable vibrating angle for each material

The most suitable vibration could be created easily by adjusting angle of resonating rubber spring.

Capable to transport large quantity even its small size

Transporting two times more quantity from conventional type by increasing frequency (max. 17.5Hz) and stroke (max. 12mm) even though the body itself is not big.



Picking work becomes easy with this unit

By easily adjusting stroke and frequency with a inverter, material bounce height could be minimized. Therefore, worker's eyes will not get tired while picking work because materials will not jump around.

Low height, low floor type

Lowered its body by connecting special designed rubber springs and light weight steel base frame, and trough.

Quiet with vibration control structure

Vibration of a base frame is very small because of resonance vibration which create effective vibration effect even small vibrating source. Also, special spring is installed under a base frame, so floor reaction is very small. Thus the operation is not noisy.

Easy maintenance and check up

Structure of the unit is simple. Moreover, rubber springs and bearings are installed out side of its body, so maintenance, check up, and parts exchange are very easy.

Easy speed adjustment

Transporting speed is adjustable by changing vibrating frequency by an inverter.

Electromagnetic Vibrating Conveyor

Prevent contamination with its simple structure

Electromagnetic type without using motor, bearing, and rubbers.



Realized downsizing by lowering the height

Low-height long conveyor NEW

MDF series

This is low-height type electromagnetic feeder for long distance material transport by drastically lowered height structure for corresponding various installation layouts. By installing SUS cover on driving part, cleaning becomes easier. As a result, risks of contamination intrusion could be prevented.



Features

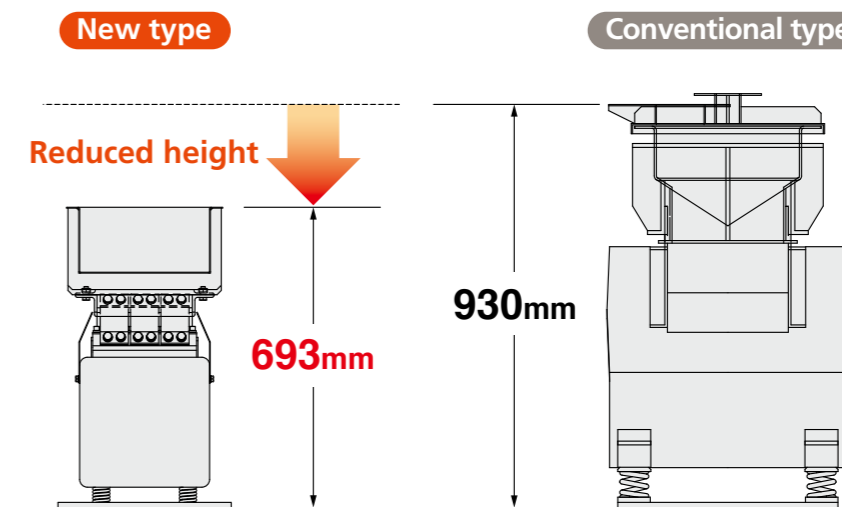
Realized downsizing

Contributing for neat layout by covering a driving unit underneath of the trough.

Low-height conveyor capable to transport long distance

We could successfully lowered height of machine by overlooked its designing while conventional model needed certain height when long distance transportation. You could use your space effectively even the space was limited.

Comparison of new and conventional models



※Height is when trough width is 300mm/ length 5000mm

Linear motor driving horizontal sliding movement

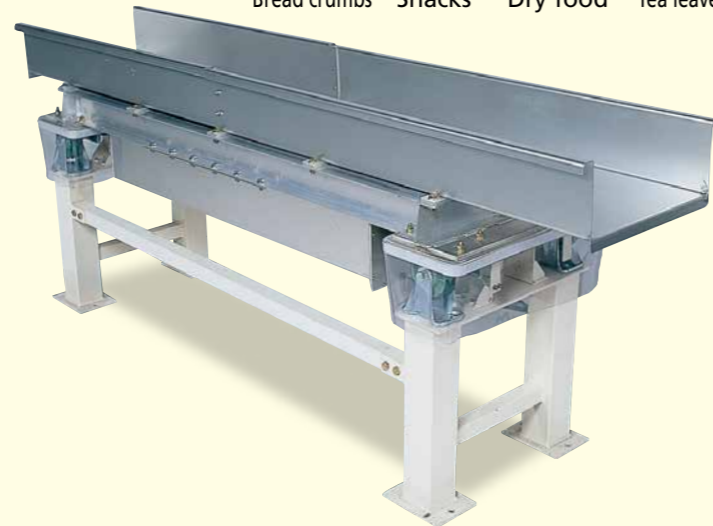
Sliding Conveyor

HDC/HDCG series

This is the world first conveyor with horizontal sliding movement driven by linear motor.

The unique structure realized no material damage transporting, with quiet, and low pollution characteristics.

This conveyor providing you very good innovation for your food manufacturing line.



Features

Soft, delicate material transport

Unlike conventional vertical vibration, the conveyor slides materials smoothly by repeated horizontal movement. Therefore, very delicate, and light foods can be transported. Also, seasonings remains on food compare with conventional vibrating conveyor.



Low operation noise

Because foods "slide" on trough, operation noise is very low. Also, stroke and frequency can be adjustable.

Easy switching handling direction

Because linear motor rotate both normally and reversely, forwarding and backward is easily changed.

Low floor reaction

Almost no vibrating effect to surrounding equipment or floor because of its horizontal movement.

Handling speed adjustable

Depend on your food, or production process, you could adjust most suitable speed for the operation.

Longer over hanging

Able to keep longer over hanging compared with conventional conveyor.

Movement of gateless conveyor

Gateless sliding conveyor's trough part itself moves, so that the gap between another conveyor works as a slide gate. Gate opening frequency can be scheduled with an exclusive controller.

Center point of the trough moves



By moving the trough itself, it works same as a slide gate.

The most suitable feeding system for weigher

Sliding Feeder

NEW

LOF series

By applying horizontal vibration movement, breakable materials such as snacks slides and be transported softly. Moreover, overhang is designed 1.5 times longer than conventional type, and It makes possible for material feeding to weighers.



Features

Suitable for feeding to weighers

Trough designed 1.5 times longer than conventional, and suitable for material feeding to weighers.

Space saving

Controller is installed inside of a body part, and it leads to drastic space saving and free layout at limited space area.

Horizontal movement friendly to products

On conventional vibrating conveyor, materials bounce and transported. But this conveyor slides and transport material. Therefore, it is gently transport materials without loss of seasoning.

Transportation direction could be switched

While conventional vibrating conveyor can only transport one direction, HD motor driven sliding feeder's horizontal vibration is switchable to transporting direction.

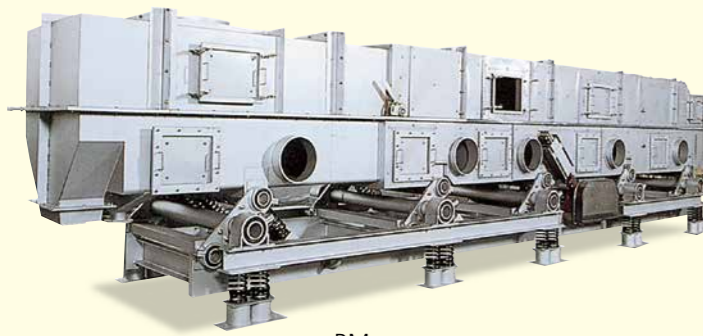


Dry and Cool Materials Evenly

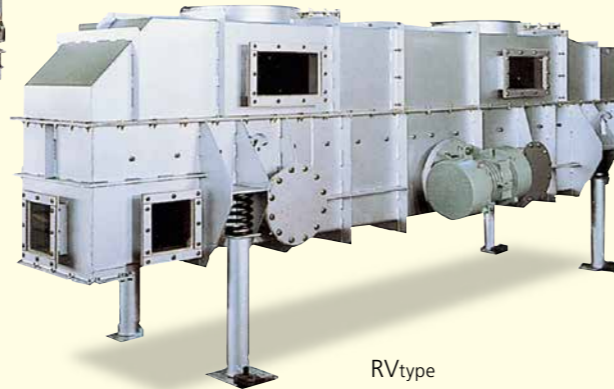
Vibrating Dryer and Cooler System

RV type / BM type

While foods were transported on a trough by vibrating force, hot, or cool air blows into trough, and pass through between each materials evenly. With the vibrating movement and blast effect, materials are fluidized. Thus, high quality and even drying and cooling realized.



BMtype



RVtype

Features

Even drying and cooling

By fluidized with vibration and air, different sizes or weight of materials can be evenly dried or cooled.

Temperature, and humidity adjustable

Material temperature and humidity can be adjustable, by controlling vibration for changing transpiring speed. Therefore, depends on surrounding temperature, humidity or water containing rate, food quality can be specifically adjustable.

Material are not damaged

As the blowing air works as cushion, damage to the materials are reduced. Therefore, breakable materials will not be powdered.

Drying and cooling simultaneously

The system are able to control humidity and temperature by hot and cool air in order to control product quality specifically.

High efficiency with low energy consumption

Because this system fluidize material while transport, blowing power is saved compared with other drying and cooling systems. Moreover, realized efficient processing per square meter with its high heat conductivity.

Applicable various materials

Materials won't stay in one place because a trough is vibrating. Therefore, High humidity materials can be applied if vibration and wind speed adjusted.

HACCP corresponding trough

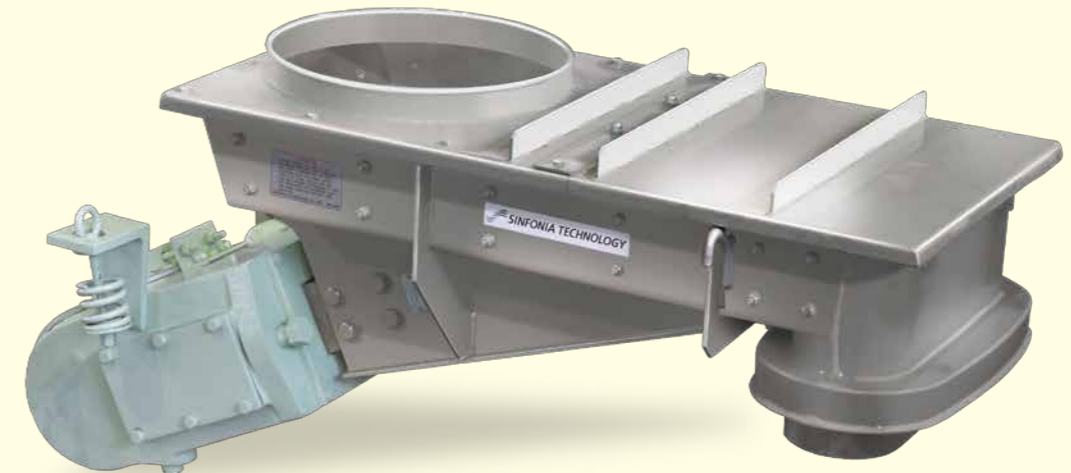
Our originally designed trough correspond with HACCP. It is very easy to maintain hygiene state because by curving corner of trough part, washability improved.

Applicable widely from powders to large particles

Electromagnetic Feeder

F type

Vibrating feeder is the most effective unit for volumetric feeding, and applicable for various products. Vibrating feeders are usually hanged to use, but there are floor mounted type feeders also available. Trough part made by stainless steel.



Features

Supply amount easily controllable

By changing dial of controller, supply amount can be changed. Supply amount can be automatically controlled by combining with scale, or thermometer. Especially, the feeder is frequently used with a scale for mixing materials.

For preventing contaminations

Because trough part is sealed, contamination will never mix with handling foods. Also, grease or oil are not used for maintenance.

Saves maintenance cost

By using resonance effect, energy consumption is low. Moreover, maintenance is easy because its simple structure.

Customize for special use

Sealed trough, non sticking liner, and water cooling jacket could be installable. Also, water proof type and heat resistant type available optionally.



Whole body washable

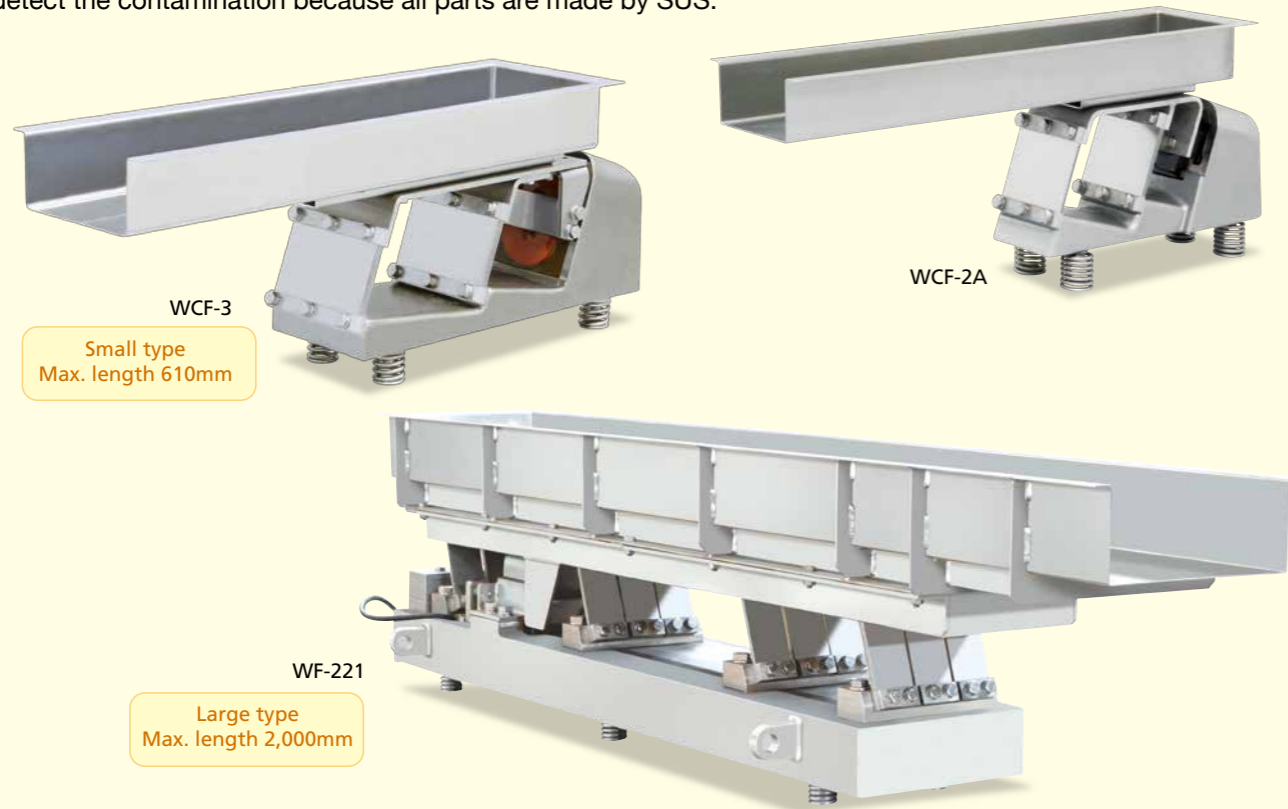
Water Resistant Electromagnetic Feeder

WF/WCF series

This feeder is suitable for food production line which requires high sanitary standard. Every parts including electromagnetic coils and other electronic parts are all sealed inside of stainless frame.

Therefore, not only a trough but also a driving part is washable, so that even allergens can be washed away.

In order to prevent contamination, we avoided using painting and a cover not to make difficult to wash. Moreover, if by any chance the body pieces get through into production line, metal detector can detect the contamination because all parts are made by SUS.



Features

Food safety

It is very easy to wash when changing processing food because whole body is water proof. It avoids allergen contamination.



Contamination free

No contamination because resin and painting is not used. Also, all parts are detected by metal detector.



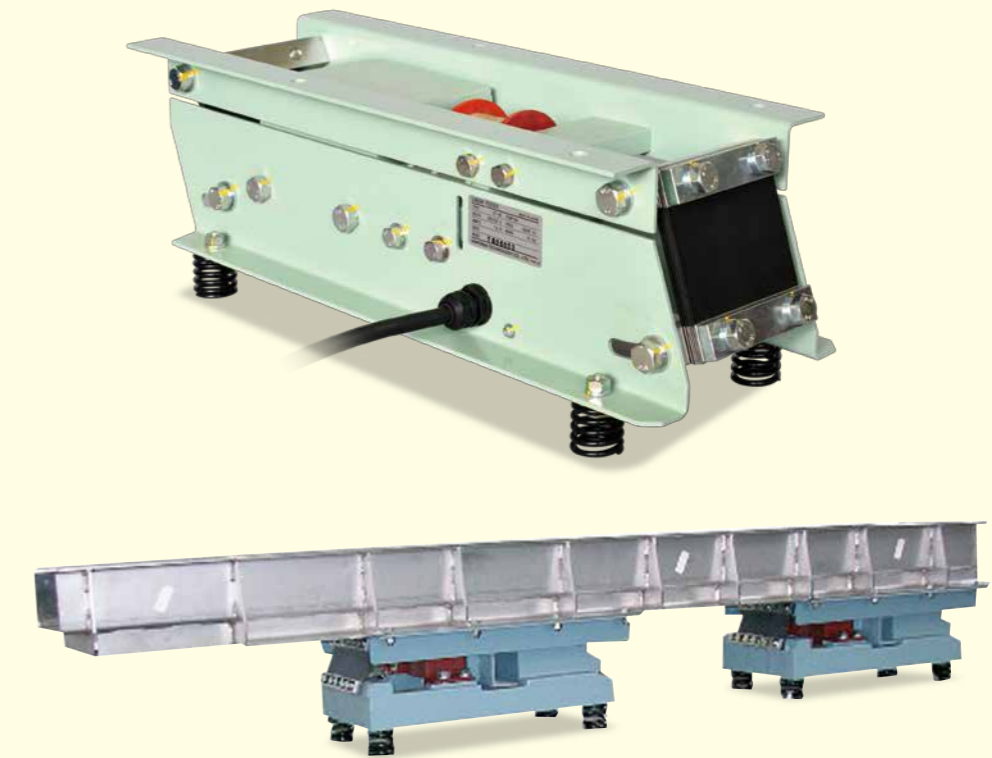
Stable Linear Feeding for even ultra small particle powders

Linear Feeder

LF type

This linear feeder transport food straight forward by using leaf springs and electromagnet installed in a driving part. Strokes and vibrating angles are easily adjustable, so the feeder gives uniform vibration to handling materials. It is applicable widely from sugar, snacks, and other food products.

Depends on manufacturing environment, tandem or parallel installation can be possible. Every chutes or troughs are all custom made.



Features

Large size feeder provides smooth workpiece delivery

Large, vibro-isolating feeder that keeps the flow of workpieces smooth through adjustment of leaf-spring angle.

Long distance transport by tandem installation

By installing several driving units, long distance transportation is possible.

Dial control for free adjustment of conveyance speed

By changing the vibration frequency and amplitude with the dial control, delivery speed can be freely adjusted.

