

Offering solutions on reliable product manufacturing

Food Product Catalogue

Seishin Enterprise Co., Ltd.

Technical solutions
that only SEISHIN can offer



Message

Seishin Co. has always been engaged in manufacturing from customer's perspective since its inception on 28 August 1968. Seishin which is a composite manufacturer of powder processing equipment, began with Particle distribution measuring equipment that enhanced Japanese quality control dramatically and subsequently developed various measuring equipment, Jet Mill and Air Knocker and established Custom Processing Business in the market, thereby building the base for the industry handling powders and has always been the leader in the industry.

Some of the equipment manufactured by Seishin provide back up for the national policy on enhancement of self-sufficiency in food in Japan and amidst increasing health consciousness, experience of Seishin of manufacturing powder equipment is being used widely for manufacture and sale of health foods and other functional foodstuffs.

In recent years, in line with the social environment in Japan, Seishin marketed 「shearing heat type cereals gelatinization crusher」 that crushes white rice and makes it edible and has been focusing on the food business that offers safe and secure food stuffs for the elderly in Japan and children overseas.

The biggest strength of Seishin is that it specializes in powder technology and all its employees work with a sense of professionalism. Also, it has captive factory in each region that has the environment for majority of its employees to improve the equipment from customer's perspective.

Seishin would like to grow hereafter too along with its customers, seek safety, security and high quality and contribute to technological advancement of manufacturing of Japan.



Learn about heterogeneous culture for global market
Beijing, the Great Wall (Company trip in 2008)



Opening Ceremony
at Yamaguchi Ube Kotobuki Factory in 2012



SKS-50 Automatic Sterilizer



PITA-3
Dynamic Image Analyzer/Particle Analyzer

Introduction

Machinery

Reliable advanced technology that caters to the needs of time

Customer Support

Service system to help our customers use our equipment with peace of mind

Custom Processing

Best-in-Japan Powder processing environment, technology and quality

Custom Food processing

Food processing business that continually pursues high quality with safety and security as the motto

Branch Offices

Be close to our customers based on locally established captive factories across Japan

Affiliated Companies

Proactive deployment in the global market

MEASURING INSTRUMENT

- Measurement equipment sales div.
- Arakawa Factory
- Powder Technology sales div.
- Powder Technology Center
- Customer support

PLANT EQUIPMENT

- Plant sales div.
- General purpose machine div.
- Technical div.

KOGA DEVELOPMENT LABORATORY

CUSTOM PROCESSING

- Eastern Japan Custom processing sales div.

NIKKO FACTORY

- Western Japan Custom processing sales div.

TONEGAWA FACTORY

HIBIKINADA FACTORY

- Functional-materials powder sales div.

CUSTOM FOOD PROCESSING

- Eastern Japan Custom food processing sales div.

YAMAGUCHI UBE KOTOBUKI FACTORY

- Western Japan Custom food processing sales div.

NIKKO FACTORY (Food Building)

HIBIKINADA FACTORY (Food Building)

- Health food sales div.

- Sendai.B.
- Toyama.B.
- Shikoku.B.
- Ube.B.
- Kita Kanto.B.
- Nagoya.B.
- Okayama.B.
- Kyusyu.B.
- Minam Kanto.B.
- Osaka.B.

- JS Tech Co., Ltd.
- JS Tech Co.,Ltd. Busan.B.
- Haturatsu Co.,Ltd.
- Bombonera Co., Ltd.
- Yixing Seishin Powder Machinery Co., Ltd. (Joint Venture Company)
- Seishin Powder Technologies (Jiangsu) Co., Ltd.
- Shanghai Seishin Genko Trading Co., Ltd.

Micro-technology in food processing

Of late, even the food-related customers including those of health foods are seeking new functions and performances and the demand for micro processing technology where original functions of materials are utilized is increasing rapidly.

There has been dramatic growth of custom processing in food in recent years and Seishin established Yamaguchi Ube Factory which is a dedicated food custom factory at Ube in January 2013 to realize 100% satisfaction of all the customers.

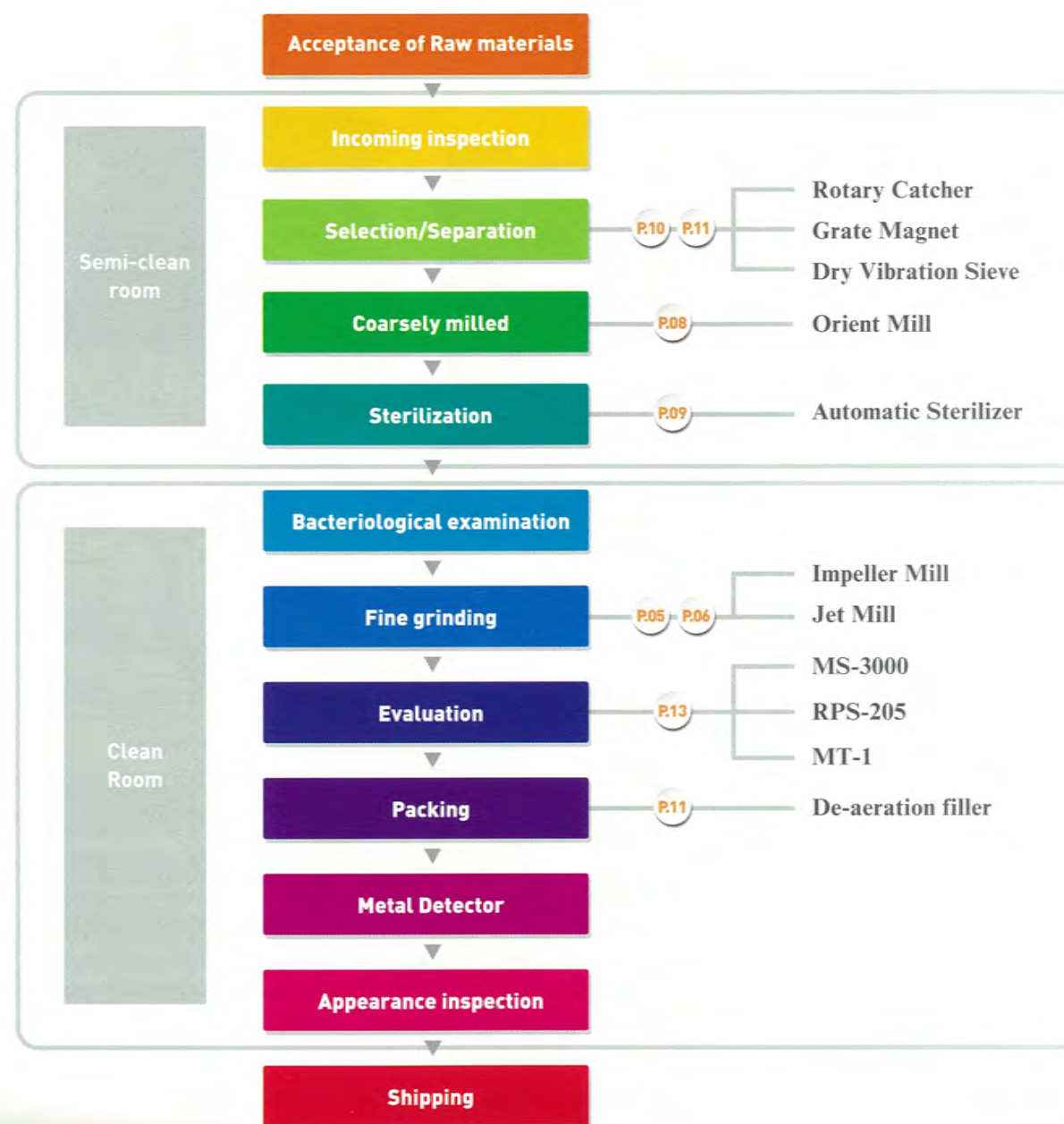
It is state-of-the-art factory where sorting, sterilization, classification, granulation, drying, mixing, surface treatment and analysis can be carried out in an integrated manner under advanced processing environment.

In order to contribute to safety and security in food, Seishin shall push forward vigorously in food business that is useful for everyone, using 'micro technology in food' as the slogan.

We hope to receive your continued patronage in the future.



Food processing flow and equipment used



Its area is about 30,000 m² and is the largest among our own factories. Mount Fuji and cherry blossom tree on the wall of the factory catches everyone's attention. The idea behind is to create the best factory in Japan.

Yamaguchi Ube Kotobuki Factory



Semi-clean room

Clean room (Corridor)

Clean room

Jet Mill for food

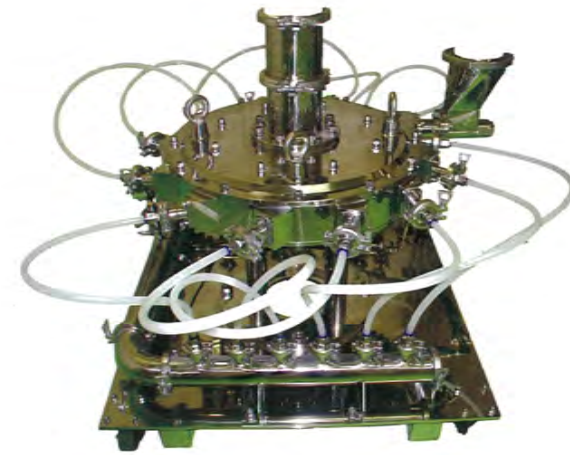
Wet type mill STJ Series that can crush into most fine particle

Overview

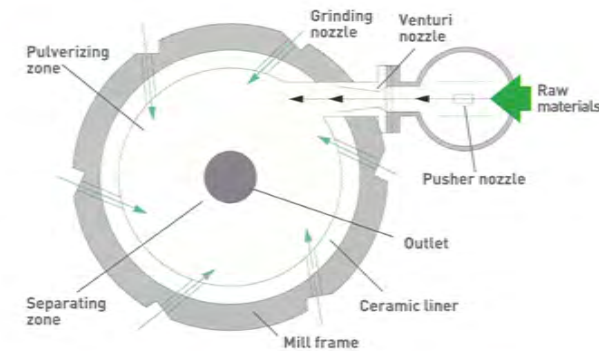
Seishin's jet mill has been in existence for 40 years and has maximum number of shipments in Japan. It is ultra-fine grinding mill that is being widely in fields like pharmaceuticals, food, cosmetics, ceramics, electronics, and secondary battery.

Grinding mill structure and the principle of grinding

Crushed material fed in fixed quantity is supplied into the grinding mill continuously through the pusher nozzle and compressed air that becomes the source of power for grinding is supplied into the grinding mill via the grinding nozzle. Crushed material carried by the jet stream inside the ceramic covered grinding mill undergoes repeat impact crushing to form uniform few micron grains.



Single Track Jet Mill : Model STJ-475



Features

No heat generation

Compressed air fed into the grinding mill undergoes adiabatic expansion and restrains heat generated at the time of grinding. It enables grinding of low melting point material and fine grinding of sub-micron region is possible without losing the characteristics of materials such as discoloration due to heat.

Operability

Generated particle size is controlled by adjusting the feed rate per unit time. Shape of particle size distribution can be adjusted by regulating the compressed air pressure.

Specification

Model	Pressure MPa	Air volume m ³ /min at 0.65MPa	Power kW	Processing capacity kg/Hr
FS-4	0.65 }	1.2	11	0.5~2.0
STJ-200		2.8	22	2.0~20
STJ-315		5.1	37	10~50
STJ-400		7.9	55	20~100
STJ-475		10.8	75	50~200
STJ-560		16.8	125	100~350
STJ-670		29.6	180	300~800
STJ-750		40.2	255	600~1,200

Dissolubility and Washability

There is no drive part in the grinding mill and residue in the system is very less. Hence, dissolution, washing and disinfection can be easily carried out. Its design facilitates processing of food material.

Milling time

Time required for grinding in the grinding mill is in seconds and there is no impact due to contamination or heat on the material from the grinding process.

Example of grinding

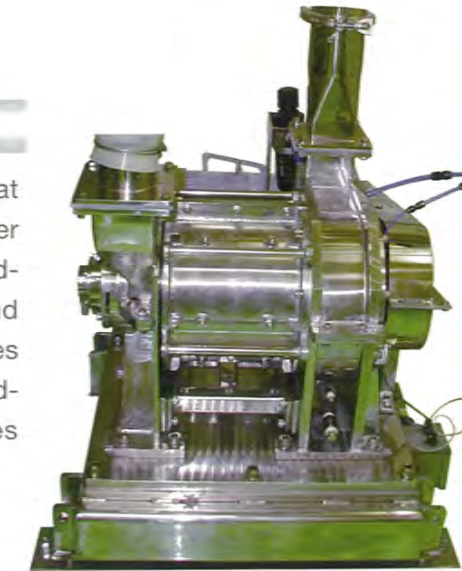
Raw material	Raw material particle size	Particle size after grinding
Young barley leaf	Under 1 mm	Less than X ₅₀ = 15μm
Kale	Under 2 mm	Less than X ₅₀ = 15μm
Powdered tea	Under 1 mm	Less than X ₅₀ = 10μm
Turmeric	X ₅₀ = 50μm	Less than X ₅₀ = 10μm
Oils and Fat	X ₅₀ = 60μm	Less than X ₅₀ = 5μm
Bonito	X ₅₀ = 60μm	Less than X ₅₀ = 10μm
Amino Acid	X ₅₀ = 500μm	Less than X ₅₀ = 8μm
Hyaluronic acid	X ₅₀ = 100μm	Less than X ₅₀ = 5μm

Machine type fine grinding mill for food-Impeller Mill

It is excellent in operability, dismantling and washability and is a general-purpose machine for diverse fine grinding.

Overview

It is high-speed rotary grinding mill that can grind finely. Grinding in the impeller mill happens between multi-stage grinding impeller and waveform liner around the circumference. Main grinding forces are impact, shearing strength and grinding force and grinding force increases each time rpm is increased.



Impeller Mill : Model IMP-250



Inner structure

Features

Resistance to corrosion and Wear resistance

It has excellent corrosion resistance as stainless steel is used in the powder contacting part. And the part that gets exposed to grinding force has wear and abrasion resistance countermeasure.

Dissolubility and Washability

Dismantling and washing can be carried out easily. Similar structure has been adopted for both small and medium sized machine.

General versatility

It is suitable for grinding diverse materials up to dozens of microns level as switching is easy. Freeze crushing using liquid nitrogen is also available as standard equipment.

Operability

Material of several centimeters size can be crushed to several microns size. Formed grain size can be controlled easily by adjusting the rotor revolutions and feed amount.

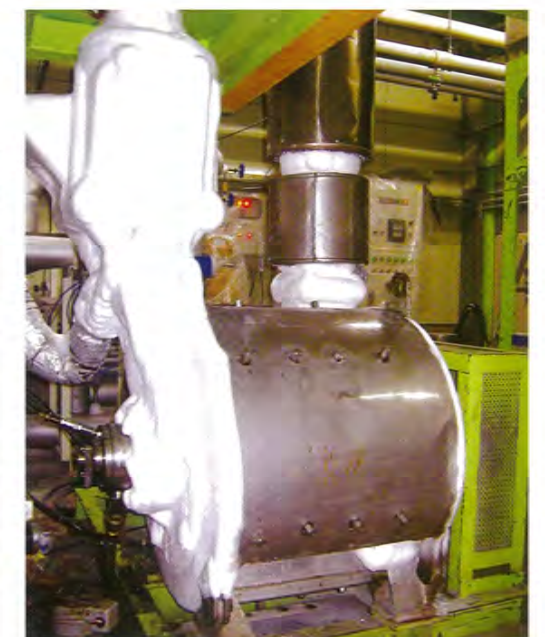
Specification

Model	Inner radius of grinding chamber mm	Power kW	The number of rotation r.p.m
IMP-250	φ250	7.5~15	~9,000
IMP-400	φ400	15~55	~5,500

Track record

Raw material	Raw material particle size	Model	Power	Particle size after grinding	Processing capacity
Coffee Charcoal	Under 2 mm	IMP-250	11kW	X ₅₀ = 100μm	100kg/hr
Gelatin	Under 5 mm	IMP-250	15kW	180μm PASS 95%	25kg/hr
Fumaric acid	X ₅₀ = 64.6	IMP-250	15kW	X ₅₀ = 9.9	12kg/hr
Rice young leave	X ₅₀ = 1.5mm	IMP-400	55kW	X ₅₀ = 30μm	180kg/hr
Young barely leaf	Under 1 mm	IMP-250	15kW	X ₅₀ = 30~40μm	60kg/hr
Green tea	Dried tea leaves	IMP-400 Frozen	55kW	125μm PASS 90%	300kg/hr
Olive leaf	X ₅₀ = 2.5mm	IMP-400 Frozen	55kW	X ₅₀ = 30μm	100kg/hr
Chitin	Under 1 mm	IMP-250	15kW	X ₅₀ = 30μm	20kg/hr
Kale	Under 1 mm	IMP-250	15kW	80MESH PASS 90%	50kg/hr
Kale	Under 2 mm	IMP-250	15kW	X ₅₀ = 30~40μm	150kg/hr
Panax notoginseng	Under 1 mm	IMP-250	15kW	X ₅₀ = 20μm	50kg/hr

Equipment for frozen crushing

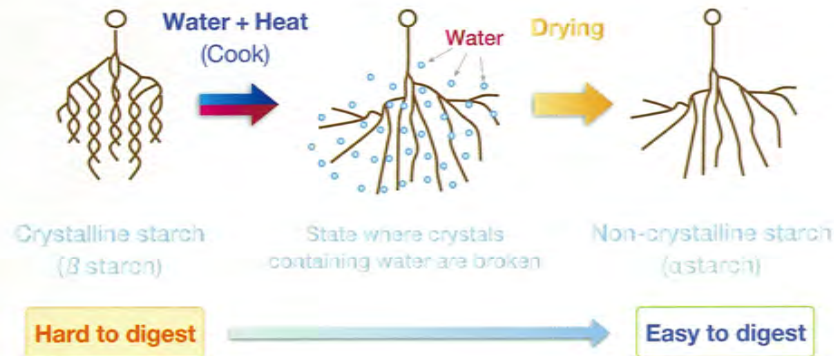


Shear heating type Cereal gelatinization grinder

Cereals having starch as the main constituent can be easily converted into gelatinized powder

Overview

It converts crystalline starch (beta starch) contained in cereals like rice and is hard to digest into easily digestible amorphous (gelatinized starch) and crushes it into powder. Gelatinized cereal powder absorbs water if water is added and becomes pasty viscous matter and can be used as food additive like thickener.



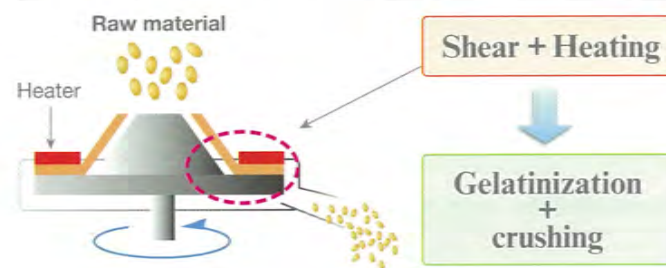
HSM-250

Principle

It is fitted with heater in the mortar type grinder and gelatinizes and converts starch into powder based on moisture contained in material and heat from the heater and shearing force.

Patent No.4767128

Principle



Features

Simplification of the manufacturing process

Unlike the conventional gelatinized manufacturing method, gelatinized cereal powder can be obtained only with this equipment without having to implement multiple processes and process control is also easy.

Short crushing time

Alteration of material (color and decline in taste) is less as the product is released within few seconds after charging of material.

Dissolubility and Washability

It has simple structure and can be easily dismantled without using any tools.

Operability

It can process material up to the 7mm in size and diverse gelatinized powder can be obtained by changing the heating temperature depending on the type of cereal.

Specification

Model	Processing capacity kg / hr	Power kW	Heating temperature °C	Approximate weight kg
HSM-250	~10	3	Max.150	150
HSM-090 Desk-type laboratory equipment	~0.1	0.9	Max.150	15

HSM-250 comes with feeder. (One batch storage amount: Approximately 15kg of polished rice.)
HSM-090 has feeder as an option.

[HSM-250 option] Hopper dust collector (0.75kW), Powder duct collector (0.75kW) and Floor type automatic conveyer with a signal tower (Power: 0.2kW Storage: Polished rice 120kg)

Example

Raw material	Polished rice	Adzuki bean	Barley	Glutinous millet	Sticky millet
Model	HSM-250	HSM-250	HSM-250	HSM-250	HSM-250
Processing capacity (kg / hr)	8	6	5	5	5

This product was developed based on R&D by Dr. Akihiro Nishioka under subsidy from NEDO (New Energy and Industrial Technology Development Organization) under 2nd Industrial Technology Research Grant Program for 2006 (ID:06B44511a) and marketed by Seishin. For any inquiries on uses and performance of this product, Seishin is solely responsible.

Orient Mill for food

Excellent operability, dismantling, washability, and suitable for diverse coarse grinding

Coarsely milled

Overview

All-purpose mechanical coarse grinder that can handle grinding of hard, soft and fibrous materials simply by changing the screen mesh equipped inside the grinder.

Grinding is carried out by shearing force and impact occurring between fixed blade and rotary blade equipped in the grinder.

Features

Corrosion resistance

It has excellent corrosion resistance as stainless steel has been used in the powder contacting part. Grinding blade is made of hard material having high corrosion resistance.

Dissolubility and Washability

Dismantling and washing can be carried out without any worry as it has a safety device and that too in a short time.

General versatility

It is ideal for diverse grinding as switching is easy. It can be used not just for food but all kinds of materials such as minerals, resins etc.

Operability

It can grind materials ranging in size from 1cm to 1m. Generated particle size can be adjusted easily based on screen size.

Crushing time

Low retention time coarse grinder during grinding makes it hard to be affected by heat. Screen can be replaced easily.

Specification

Model	Processing capacity kg / hr	Power kW	Rotation r.p.m	Approximate weight kg
VM-16	60 - 100	1.5	1500	110
VM-22	150 - 200	3.7	1000	250
VM-27	150 - 200	3.7	750	300
VM-32	250 - 400	7.5	750	450
VM-42D	500 - 600	15	750	950
VM-50	1200 - 1500	30	640	2000



Orient Mill : Model VM-32 (Orient Crusher Co. Ltd.)



- ① Setting cutter
- ② Screen
- ③ Stand cutter
- ④ Rotary cutter

Example of grinding

Leafy materials	Roots	Fruits	Others
Young barley leaf	Ginseng	Guava	Amino acid
Pong	(Kind of) Sweet potato	Chlorella	Ascorbic acid
Kale	Turmeric	Tomato	Astaxanthin
Angelica keiskei	Burdock	Loquat seeds	Calcium
Rush	Maca		Chitosan
Ginkgo leaf	Seaweeds	Mushrooms	Glucosamine
Macrophyll	Sea lettuce	Agaricus	Silk
Aloe	Wakame	Ganoderma lucidum	Softshell turtle
Parsley	Mozuku	Shiitake mushroom	Collagen
Powdered green tea		Hericium erinaceum	Rice bran

Automatic Sterilizer

Perform high-mix low-volume production and continuous production

Overview

SKS-50 sterilizer is continuous type air jet sterilizer using superheated vapor. There is less deterioration of material as sterilization is carried out in few seconds. This fully automatic air jet sterilizer SKS-50 has been designed from operator's viewpoint for ease-of-operation.



Sterilizer : Model SKS-50

Features

Space saving and low price

This device is automatic, small in size and low price compared to conventional devices.

Can handle SIP and CIP**

It is possible to auto-wash and auto-sterilize most of materials without dismantling the device. Washing can also be carried out easily as dismantling is easy.

Easy maintenance

High-temperature high-pressure rotary valve used in SKS-50 sterilizer has cantilever specifications and compared to both side shaft specification, dismantling, washing and assembly can be carried out in below 1/5th the time.

It can sterilize materials containing fine powder and oil

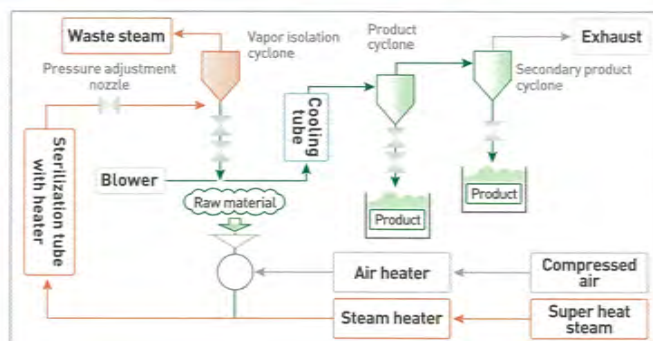
It enables sterilization of materials containing fine powder and oil that was considered to be difficult so far.

Does not harm the material

It enables sterilization of material without heat deterioration, as sterilization time is few seconds. Sterilization time can be controlled based on variable nozzle (Pressure adjustment nozzle). It secures the value of material that are prone to be influenced by heat.

**Parts that have strong adhesion are sometimes dismantled and washed beforehand.

Sterilizer flow diagram



Product cyclone: Air cyclone to separate products HRV: High temperature high pressure rotary valve

Sterilizer flow diagram

Raw material supplied from fixed quantity feeder is fed into heated and pressed vapor sterilization line. Line after high temperature high-pressure rotary valve (HRV) till the heating tube and steam isolation cyclone is heated and kept warm and prevents adhesion of material in the tube. Inside the heating tube, material is dispersed and sterilized inside the steam and sterilized product and steam are separated efficiently through the variable nozzle (pressure adjustment nozzle).

Product separated from steam is reduced to normal temperature via the cooling tube and dried during transportation based on dry air and is arrested at the product recovery cyclone.

Specification

Principal materials	Powder contacting part SUS304	
Dimensions for non-hygienic area	8,400W×2,600D×2,300H (mm)	
Weight	1,700kg	
Utility	Power	3φ×AC200V×25kW
	Steam	100kg/hr(0.20MPa)-150kg/hr (0.30MPa), During washing 200 kg/hr
	Air	400NL/min
	Cooling water (Cooling tower water)	250 L/min
Attached facilities	Control panel (Power source, Sequencer)	1,200W×300D×900H (mm) Built-in type
	Control panel (Touch panel)	500W×200D×400H (mm) Built-in type
	Boiler	900W×900D×1,980H (mm) Stand-alone type
	Cooling tower (30~40RT)	Fan: 0.2kW, Pump: 2.2kW

*Sterilization can be made from a small quantity up to a ton

Representative example of sterilization

	Before processing		After processing	
	General live bacteria (P/cg)	Coliform group number (P/cg)	General live bacteria (P/cg)	Coliform group number (P/cg)
Young barely leaf	7.5×10 ⁴	1.3×10 ²	<300	Negative
Mulukhiya (Jew's mallow)	7.0×10 ⁴	Positive	<300	Negative
Hericium erinaceum (bearded tooth fungus)	1.0×10 ⁴	Negative	<300	Negative
Ginger	1.0×10 ⁵⁻⁶	Positive	<300	Negative
Maca	9.0×10 ⁴	1.5×10 ²	<300	Negative

※ Dimensions, weight and motive power vary depending on supply device and recovery method.
 ※ Control panel and touch panel are built-in as standard specifications.
 ※ Boiler and cooling tower are optional.
 ※ Above specifications are subject to change without prior notice. We seek your understanding and cooperation.

Various carefully selected apparatuses for food

Use a combination of suitable apparatus matching the shape of materials

Metal Detector for food Metaridder SMS-401 Detection and elimination of all kinds of metals without using the magnet

Overview

Detection and elimination of all kinds of metals including non-magnetic metals is possible. High sensitivity sensor not only detects metal body but also metallic impurities contained in powder grain.

Principle

Electric current is generated in whirlpool form on metal surface when metal dropping from top comes closer to the magnetic field [A] (more than approximately 10MHz) generated by sensor and the magnetic field occurs in the direction negating [A] (the opposite direction of [A]). The mechanism is to detect magnetic field [B] that occurred and it is adjudged as metal in case strength of the magnetic field is beyond the pre-determined value.

Features

Metals that cannot be captured by magnet are eliminated

All kinds of metals such as stainless steel, aluminum, brass, copper, lead etc. can be detected and removed.

Washing is easy, and washing in water is possible

Powder contacting part has stainless buffing which does not have powder residue. Device can be divided into sensor part and dumper part. Device can be maintained in hygienic condition as dumper part can be washed in water.

Specifications

Model	SMS-201	SMS-241	SMS-301	SMS-401	SMS-501
Ability to detect	Fe: φ0.2 SUS: φ0.3	Fe: φ0.3 SUS: φ0.3	Fe: φ0.5 SUS: φ0.6	Fe: φ0.8 SUS: φ0.9	Fe: φ1.0 SUS: φ1.5
Contaminant discharge mechanism	Swing bucket system				
Material	Powder contacting part : SUS304, Ceramic, Silicone rubber				
Weight	Over 15kg				
Power	Magnet-type metal removal device				

Magnet-type metal removal device

It is a magnet-type metal removal device removing a metallic contaminant efficiently.

Rotary Catcher

Size (Diameter): 100~250A
Model: MRC150A



Powder grain bodies are scattered and metallic contaminants are removed effectively based on rotor which has a strong built-in magnet of 13,000~15,000 gauss. It has a design that facilitates easy dismantling, washing and removal of magnetically attracted substances and assembly is also easy. Iron powder from several millimeters to several microns can be removed.

Grate Magnet

Eriez Magnetics Japan Co., Ltd.

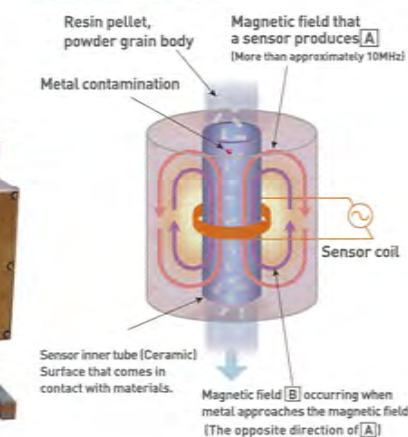


Type of magnet: Neodymium
Size (length × width): 220×150~720×660mm

It is most common general-purpose fixed metal removal device. It has simple structure and metal can be eliminated effectively by equipping it for each unit operation.

Principle of metal detection (Dielectric loss isolation type high frequency oscillator)

● Sensor unit diagram





Vibration sieve for both dry and wet applications

Representative device for separation using the difference in particle size of powder is vibration sieve.

Scalping for separating small quantity of big particles, De-dusting for separating small quantity of fine grains, and grading for sizing are used universally.

Vibration sieve has a wide range of models such as standard, heavy duty, reverse type, ultrasonic type, sanitary specifications etc.

Packing

De-aeration filler for food

De-aeration filler that can improve work environment, production efficiency and minimize powders capacity

Overview

De-aeration filler equipped with measurement gauge is the filler that is a combination of de-aeration Auger and bag lifting device. Transportation cost can be reduced by minimizing bag capacity based on de-aeration at the time of filling and increasing the bulk density. In addition, it eliminated powder jamming at the time of the de-aeration by building-in vacuum de-aeration unit using the special metal filter in vertical Auger.

Features

Prevention of dust generation

It improves work environment and maintains the safety of operators.

Reduces waste of raw materials

Improves production efficiency of net filling and prevention of dust generation.

Improves bulk density

Improves transportation efficiency by minimizing bag capacity.

Prevention of sealing defect

Prevention of seal defect is possible as there is no dust generation.

Prevention of collapse of cargo

Prevention of entry of contaminant.



De-aeration filler with measurement gauge

Model: Vertical-type de-aeration filler
Tokyo Automatic Machinery Works, Ltd.

Filling mass: 3kg~10kg
(filling more than 10 kg is also possible)
Packing speed: 2 nos. /min
※ At the time of 10 kg filling



Start the filling



Completion of filling

Sanitary-type screw conveyor for food

Transport

Solves conventional problems! It is unparalleled all-purpose transport machinery
Reliability of 300 machines in operation

Overview

"Sanitary screw conveyor for food" places user's perspective ahead of everything else, and it has simple structure, is light-in weight and easy to dismantle and wash. It can reduce manpower cost, as it is particularly excellent in dismantling, washing and assembly. Washing of seal mechanism that was difficult so far has become possible based on adoption of newly developed optional no-contact "labyrinth seal", as seal can be removed without having to remove the motor.



Features

Washable sealing mechanism "labyrinth seal"

Dismantling and assembly in a short period of time

Waterproof design^{※1}

No metal-to-metal contact

Residual amount is very small

※1 motor, control panel IP65

Specifications

Model	FF-80	FF-100	FF-125	FF-150
Length (mm)	1,500~3,000	1,500~4,000	1,500~5,000	2,000~6,000
Height (mm)	1,200~2,500	1,200~3,400	1,200~4,300	1,700~5,100
Processing capacity (kg/hr) ※The case of bulk density 0.5g/cc	~380	~700	~1,600	~3,200
Material	SUS304 Buffing #300	SUS304 Buffing #300	SUS304 Buffing #300	SUS304 Buffing #300
Power (kW) ^{※2}	0.4	0.75	1.5	2.2

※2 200V 3 phase power supply

Example

Young barely leaf powder, Granulated sugar, Salt, Citric acid, Anhydrous dextrose, Potassium Sorbate, Milk Coffee Granules, Freeze-Dry Welsh onions, Freeze-Dry Spinach, Freeze-Dry strawberry, Frozen Corn, Thawing Strawberry, Thawing Blueberry, Cabbage, Raw white meat, Minced fish meat, etc.

Overview

Physical properties of processed goods greatly affect the characteristics of products, features and quality of products. Measuring instruments manufactured by Seishin Enterprise measure the physical properties of processed goods. They are state-of-the-art devices that protect the quality of products.

Pinnacle of laser diffraction and scattering that surpass the measuring instruments for particle size distribution



MS-3000

Features

- 1 Measurement range of 0.01~3500 μ m based on 2 wavelengths and 2 light sources has been realized.
- 2 Correlation with screening method can be obtained.
- 3 It eliminates person-to-person error based on standard operating procedure and stable results can be obtained.
- 4 Selection of wet and dry measurement can be easily carried out based on replacement of cell cassette.
- 5 It is possible to measure without breaking the particulate and granulated products, based on measurement in dry form.

Continuous automatic sound wave vibration sieving measuring instrument



RPS-205

Features

- 1 Frequency of aggregation is reduced based on increase in dispersion effect of the specimen by changing the sound wave frequency (stepless setting from 40 ~ 99Hz).
- 2 Continuous measurement of 20 samples without any human intervention is possible.
- 3 Cleaning and sieving are carried out simultaneously.
- 4 Clogging is prevented based on vertical and horizontal impact.
- 5 Vibration up to fine powder level happens as air vibrates the sample.
- 6 It is equipped with sieve cleaning function based on brushing, shock and suction.

Multi-functional powder properties measuring instrument



MT-1

Measurement items

Angle of repose	Collapse angle	Spatula angle	Compressibility Index
Cohesion	Degree of Dispersion	Tapping density	Kawakita's equation

Features

- 1 Strength and fluidity of adhesion force can be calculated with Kawakita's equation and Index of Carr.
- 2 Measurement method, and change of conditions are easy and vibration strength of sieve is variable.
- 3 Reproducibility is good and measurement results with very little human error can be obtained.
- 4 By incorporating a CCD camera, angle of spatula and repose angle can be measured.

Professional evaluation group which continually pursues quality of analysis

Trustee measurement

Overview

Seishin's Powder Measurement Technology Center in addition to measurement of particle size distribution, also handles measurement for induction and improvement of equipment such as dust explosibility test etc.

Custom measurement of Seishin where high accuracy results can be obtained without much effort and risk of investment in plant and equipment exhibits its prowess in realization of "security, safety and cost reduction" in R&D and quality control without lagging behind in measurement and analysis techniques that change on daily basis.

Measurement items

- Measurement of particle size distribution
- Shear test
- Qualitative and quantitative measurement
- Measurement of particle shape
- Specific surface area and micropore distribution
- Sample preparation
- Measurement of dust explosion
- Measurement of true density
- Other measurements
- Measurement of physical properties of powder
- Measurement of hardness

Features

Speedy response on the subsequent day

Offering/presentation of stable results

Can deal with all kinds of troubles

No investment in plant and equipment needed

Offer know-how as equipment manufacturer

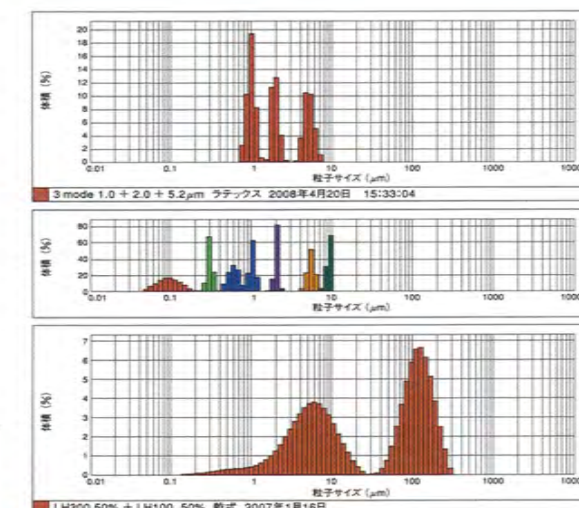
Speedy support for R&D

Measurement of particle size distribution

- Laser diffraction scattering method
- Screening method
- Particle count method
- Synthetic particle size distribution method
- Light transmission type centrifugal liquid sedimentation method
- Soil test (JIS A 1204)

Examples of measurement samples:

all types of powders, foodstuffs, magnetic materials, pharmaceuticals, fibers, soot, filtered water, river water, turbid water, soil, bottom sediment, dust in liquid etc.



Particle size distribution measurement based on laser diffraction

Powder explosibility measurement

- Lower explosive limit
- Minimum ignition energy
- Limit oxygen concentration
- Maximum explosion pressure
Explosion pressure rise speed Kst value

Examples of measurement samples:

all types of powders, food, metallic powder, resin powder



Lower explosive limit measurement



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- All products mentioned in this catalog are designed and produced for the use of general powder materials. Carry out necessary treatment if you intend to use them with dangerous materials such as poisons, explosives, etc.
- For use outside Japan, we may ask you to submit documents showing the import country, end user name and the purpose. Please ask or contact the person in charge.
- Japanese government's permission for export is needed depending on the item.

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Thank you for your cooperation.