



MCL

Vibro-screen separator





Rotary vibrating screen, it absorbs the advanced technology from domestic and overseas, and adopts senior processing technique. It is a kind of high-precision screening and filtering machine. The vertical vibrating motor is the vibrating power of machine. And there are two eccentric blocks on the motor's upper and down. The eccentric blocks make cubic element movement (horizontal, up-down, and tilting). By changing the eccentric block's included angle (the upper and down), the track that material moves on the mesh, will be changed. So that the screening target will be realized.

Any screening application is either **WET** or **DRY**
Any **DRY** application is **SCALPING**, **DE-DUSTING**, or **CALSSIFYING**
Any **WET** application is **DE-WATERING** or **FLITERING**

APPLICATION TYPES

Any screening operation can be divided into one of five categories:

DRY SCALPING

The removal of a small percentage of oversize from a product.

DE-DUSTING

The removal of a small percentage of fines from a product.

CLASSIFYING

The separation of particles by size into two or more products.

WET DE-WATERING

The removal of a high percentage of solids from a liquid.

FILTERING

The removal of a low percentage of solids from a liquid.



VIBRO-SCREEN

High efficiency, Circular vibrating screen in 8 sizes from diameter 450mm to 1800 mm that is redefining even higher capacity and reliability standards. Creative design features: Maximize screen area use, handle varying feed rates, screen materials of changing consistencies, increase the “unders” or “overs” capacities, and prevent screen blinding. One to five screen surfaces yielding up to 6 predetermined fractions with accurate separations in mesh sizes from 2 to 500 mesh (0.02mm).

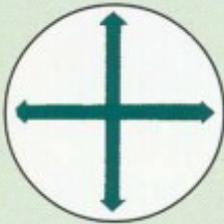
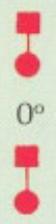
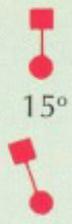
STRAIGHT-FLO SEPARATOR

High volume scalping requires a design where the material only hesitates as it flows through the screen and out of separator. The straight-flo design has dual vibrating motors attached externally at the side, and a centre conical discharge spout directly in line with the feed. The in-line feature and low height allows the scalping function to be easily added to existing flow lines, where overhead space is a premium, and on-size product drops directly down to the next process. Recommended for high volume dry scalping or high volume wet filtering. Available in all model sizes.



MTS-300 TEST SIEVE SHAKER

MTS-300, diameter 200mm, sieve mesh 200 mm × 50mm or 300mm*60mm, be used in all the laboratory rooms of different industry to proceed grading test experiment, to conduct grading screen of solid powder or liquid filtering, obtain the test experimental data. With the advanced technology of corrosion-resisting, heat-resisting, oil-resisting, dust-proof and so on, it is suitable for all of power, particle, and liquid material.

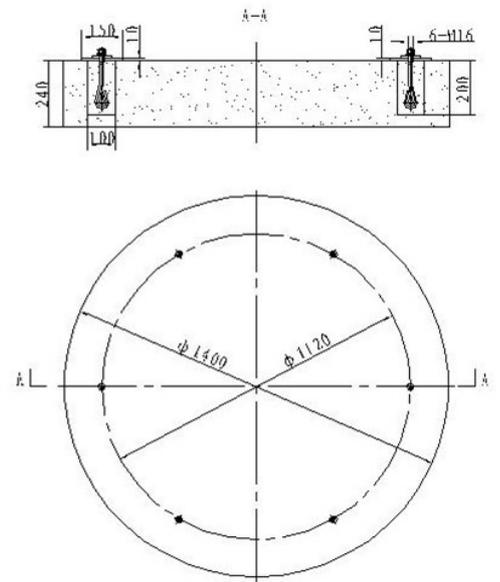
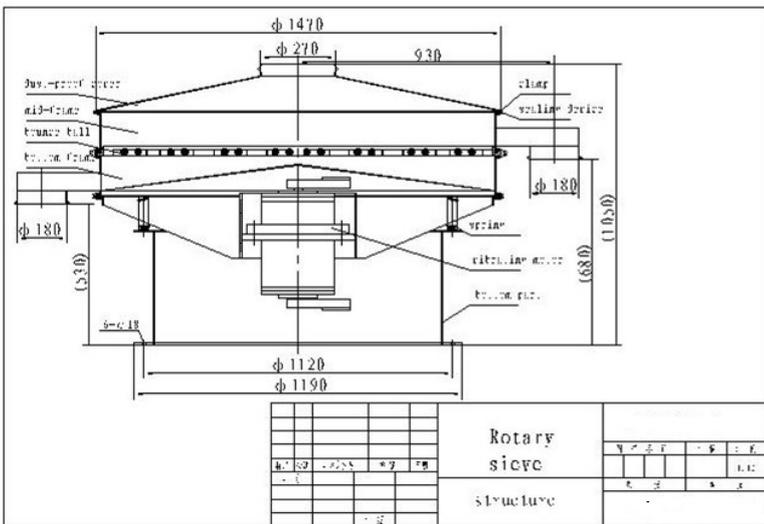
FLOW PATTERN	PHASE	DESCRIPTION	MAJOR APPLICATION
	 0°	Product flows straight from centre to circumference	Easily screenable product, de-dusting
	 15°	Slight vortex motion	Ordinary screening
	 55°	Deepest vortex	Classification of particles into several product categories, long retention time
	 90°	Grains concentrated towards center	Scalping oversize from product

ACTION AND PRINCIPLE

The principle of MCL Vibro-screen is embodied in a pair of unbalanced weights, an upper weight shaft of the motor and a bottom weight on the lower shaft, which are capable of converting the motor rotation into a 3 “three-dimensional motion”. By varying the phase-angle between the weights, the product flow pattern and duration time on the screen can be adjusted.

- Classification (uniform particle distribution)
- Separation of product and foreign matter
- Separation of coagulated and coarse grains.
- Dispersion of coagulated powder particles
- Separation of certain shapes
- Wet filtering
- Cleaning, dehydration, extracting of liquid and drying.
- Improvement of packing quality
- Granulating, extraction of dust.
- Controlling the powder flow
- Extraction of dust

Model	MCLR-500	MCLR-600	MCLR-800	MCLR-1000	MCLR-1200	MCLR-1500	MCLR-1800	MCLR-2000
Diameter (mm)	500	600	800	970	1170	1470	1770	1970
Layer	1-5							
Mesh size(mm)	0.025-20							
Rated speed(rpm)	1440							
Power (kw)	0.12	0.18	0.36	0.5	1.1	1.1	1.5	1.5



Remarks: MCL-1500 reference design drawing.

DRY APPLICATIONS

Scalping---small percentage of over-size

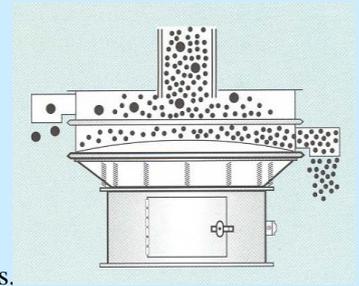
Foods: Dried milk powder, dairy products, starch powder, cocoa powder, dried eggs, spices, tea from bags.

Chemicals and petrochemicals: PVC, Polyethylene pellets, melamine, phenolics, cellulose, acetate, polystyrene, sodium carbonate, calcium carbide, copper sulphate, detergents, iron oxide, stearic acid, titanium dioxide, zinc oxide.

Minerals and metals: Stones from pit sand, barite, mica, perlite, talc, diatomaceous earth.

Animal feeds: Scalping of foreign material from mash, removal of over size from additives.

Grains: Separation of large foreign materials from bulk shipments, flour sifting.



De-dusting---small percentage of undersize

Foods: Instant coffee powders, ground coffees, cereals, spices, nuts, potato flakes, additives, vitamins.

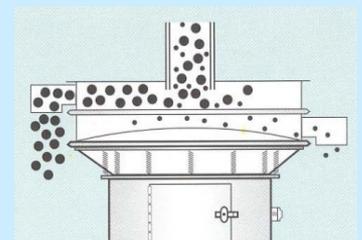
Chemicals: Polyethylene pellets, polystyrene, caustic soda flake.

Minerals and metals: steel shot, abrasives.

Pulp and wood product: Particle board.

Pharmaceuticals: tablet dedusting, granulation.

Fertilizers: Pelletised, granulated mixes, ammonium nitrate prills.



Classification-Sizing into two or more categories

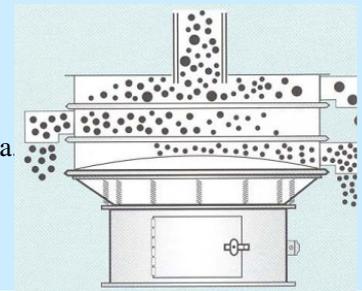
Foods: Pea grading, Sugars, Salts, Spices, Nuts, Bread crumbs.

Chemical and petrochemicals: Catalyst beds, monosodium glutamate, expandable polystyrene beads, resins.

Minerals and metals: Metal powders(aluminum, copper, bronze, nickel, iron)sand, silica

Pulp and wood products: wood chips, particle board, sawdust, wood flour

Abrasives: sand carborundum, aluminum oxide, glass beads, blasting grit(steel, oxides , iron, cooper oxides)



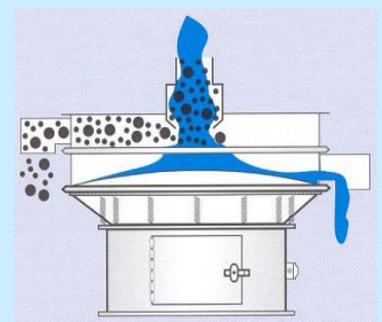
WET APPLICATION

De-watering-high percentage of solid on the screen

Food: Separation of bagasse from sugar melt, casein curd from whey, corn fiber from starch slurry, gluten from wheat starch, de-watering of fruits and vegetables, spent coffee grounds, potato slices, instant rice, tuna, caustic bottle wash, apple or citrus juices prior to filtration.

Chemicals: separation of salt from glycerine, polyethylene from extruder water, coagulum from latex, aligns from digestion, liquor, spirulina de-watering, dewatering of digested reclaim rubber, TNT, clarifying of polyvinyl acetate emulsions,

Pulp: De-watering of rejects before refining, de-watering of knots.



Filtering-small percentage of solids remain on screen

Foods: Protein from yeast slurry, chocolate liquor, frying oil, potato starch, soymilk.

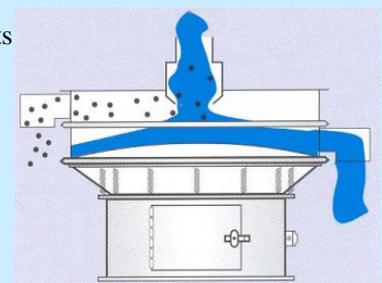
Chemicals: Aluminum paint suspension, feeds to decanters, centrifuges, classify pigments

Minerals: Separate impurities from kaolin slurry prior to centrifuging, Colombian ore, in closed circuit grinding, calcium carbonate.

Pulp and paper: Recovering fiber from mill effluent, starch size press, coating suspensions, white water to produce shower quality water.

Ceramics: Clarify body and glaze slips for dishes, sanitary ware, fine china, pottery.

Waste disposal: Cannery wastes, paunch manure from meatpacking, distillery slop.





From a spices factory. They choose the MCL-1500-1 with 30# and 20# (mesh size). The reference capacity is 3t/h. The contact part is stainless steel 304(GMP standard). The mesh material is Stainless steel 304.

First stage: removing impurity of mixture.

Two stage: grading and sizing them.

From a Milling flour factory. They choose MCL-500 with 24# (mesh size). The reference capacity is 300 KG/h (each one). Their target is to remove impurity of flour. The contact part is stainless steel 304(GMP standard). The mesh material is Stainless steel 304.



From a chemical factory. Their target is to dewater from the granules. They choose MCL-800-1 with 100 mesh sieve. The reference capacity is 300 kg/h. The contact part is stainless steel 304(GMP standard). The mesh material is Stainless steel 304.



Input material	Specific gravity(t/m ³)	Screen	Model	Dry/wet	Capacity
		Mesh			Kg/h or L/h
Chemical Epoxy Resin	1.8	100	MCL-1000-1	Dry	280
Melamine	0.4	30、60	MCL-500-2	Dry	30
MBS Resin	0.3	30	MCL-800-1	Dry	350
Urea Resin	0.6	40	MCL-1000-1	Dry	800
PVC Resin	1.0	9.5mm	MCL-800-1	Dry	850
PVC Resin	1.0	10mm/5mm	MCL-1200-2	Dry	3000
Polyethylene powder	0.45	48/100	MCL-800-2	Dry	100
P.E Pellets	1.05	10/20	MCL-1000-2	Dry	3000
Zinc Oxide	0.35	16/60	MCL-1200-2	Dry	1500
Bead Slurrv	1.1	50	MCL-1000-1	Wet	7200 L
Food Glucose powder	0.8	6/20	MCL-1200-2	Dry	2000
Wheat Starch	1.0	250	MCL-1200-1	Wet	3200 L
Flour	0.6	24	MCL-1000-1	Dry	1500
Leaven Liquor	0.5	32	MCL-1000-1	Wet	8000L
Rice flour	0.6-0.8	100	MCL-1000-1	Dry	300
Soy	1.0	100	MCL-1200-1	Wet	6500L
Salt	1.2	30/80	MCL-1500-2	Dry	5000
Defatted milk	0.58-0.7	24	MCL-1200-1	Dry	4500
Granular sugar	1.2	12	MCL-1500-1	Dry	8000
Topica Starch	1.0	200	MCL-1200-1	Wet	18000L
Palm Oil	0.9	20/40	MCL-1500-2	Wet	30000L
Orange Juice	1.0	5mm/3mm	MCL-1200-2	Wet	2000L
Coating Material Acrylic powder Paint	0.5-0.8	80	MCL-500-1	Dry	50
Epoxy powder paint	0.5-0.8	60	MCL-500-1	Dry	250
Paint	0.8	10	MCL-500-1	Wet	1800L
Polyester powder paint	0.6-0.8	100	MCL-1000-1	Dry	400
Medicine Injection	1.0	1 mm	MCL-800-1	Wet	800L
Healthy food	1.2	40/80	MCL-1000-2	Dry	2000
Medical powder	0.8	80	MCL-800-1	Dry	550

Input material	Specific gravity(t/m ³)	Screen	Model	Dry/wet	Capacity
		Mesh			Kg/h or L/h
Metal	1.5	100/200/325	MCL-1000-3	Dry	100
Brass powder					
Electrolytic copper powder	1.3-2.3	24	MCL-1000-1	Dry	200
Gold bronze powder	2.0	100	MCL-500-1	Dry	50
Aluminum powder	0.7	80/120	MCL-800-2	Dry	350
Iron powder	2.8	400	MCL-800-1	Dry	230
Manganese carbonate	3.7	60	MCL-800-1	Dry	330
Manganese dioxide	2.0	60	MCL-1000-1	Dry	1550
Alloys powder	3.0	200	MCL-800-1	Dry	250
Steel shot	4.0	4/8/42	MCL-800-3	Dry	1200
Welding powder	0.95	20/200	MCL-1000-2	Dry	500
Tungsten	8.3	20/60/100	MCL-800-3	Dry	300
Titanium Dioxide	2.1	16	MCL-800-1	Dry	500

Note:

In the item of Dry/Wet, “Dry” denotes that the input material is so dry that it flows and has no free moisture, and “Wet” denotes that the input material is so wet that it should be processed in slurry.

Process rates listed are the examples which were offered by sampled users of MCL series vibro-screen. The date may be used as reference. All data are to be evaluated in accordance with product, properties, specific gravity of input material, screen mesh, ambient temperature and humidity.

Before ordering, pls contact the supplier first to obtain the available recommendation.









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