

NoN-GRAVITY MIXER

Patent Technology Company

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Trade mark rights number : 40-1054557, 40-0985031

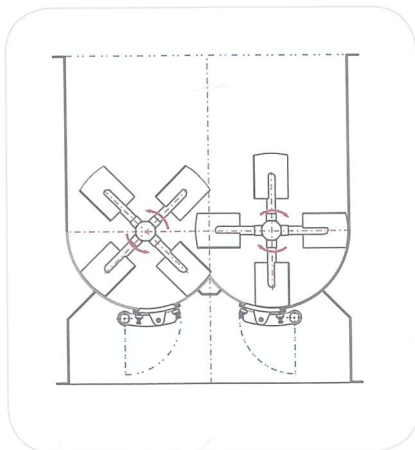
A decorative orange shape on the right side of the page, containing a white network diagram of interconnected nodes and lines.

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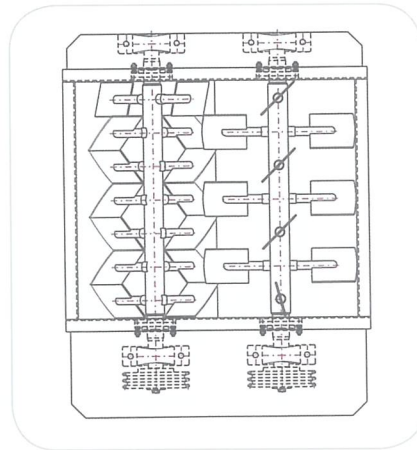


What is a Non-gravity Mixer?

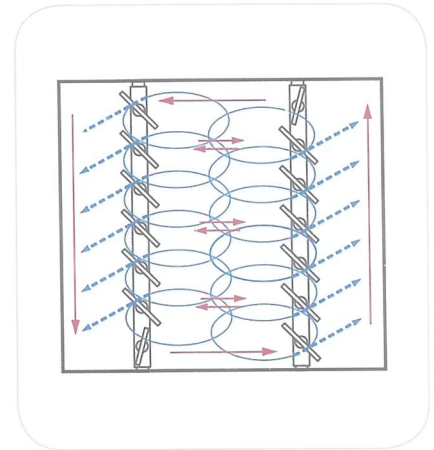
A Non-gravity Mixer is a twin-shaft paddle-type mixer with two parallel coupled to 28 arms to which paddles are attached separately. The Geared Motor driven via a chain drive keeps each of the two shafts counter-rotating at a constant speed. Paddles convey the mixed material by means of torque to the upper center of the mixing chamber. This leads to an increase in the effective volume of the mixing chamber, which allows the material to float momentarily and be mixed in a gravity-free zone.



Section View



Top View



Particle Movement

Structure

The Non-gravity Mixer is designed in such a way that a number of paddles are attached to the twin shafts in the mixing chamber in an overlapping manner and the material is conveyed to the Transport Zone and the Mixing Zone, respectively, via the constant velocity of the dual shafts. Then, regardless of the materials' particle size, specific gravity, and shape, a fluidized Zone is formed in the Mixing Zone, which allows fast mixing. The Non-gravity Mixer is designed for effective feeding and discharge of the material.

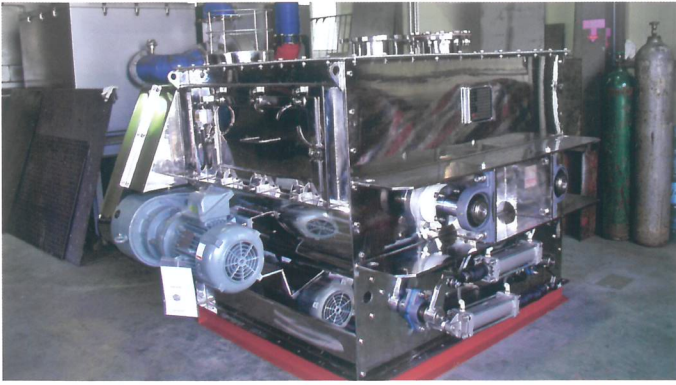
The material is fed into the top cover of the mixer and discharged through two rows (Bombay type) of long bottom doors attached to the maximum-sloped face. Due to the instant opening and closing of the air cylinder, the mixed material is easily discharged with no segregation and residual.

Principle of Mixing

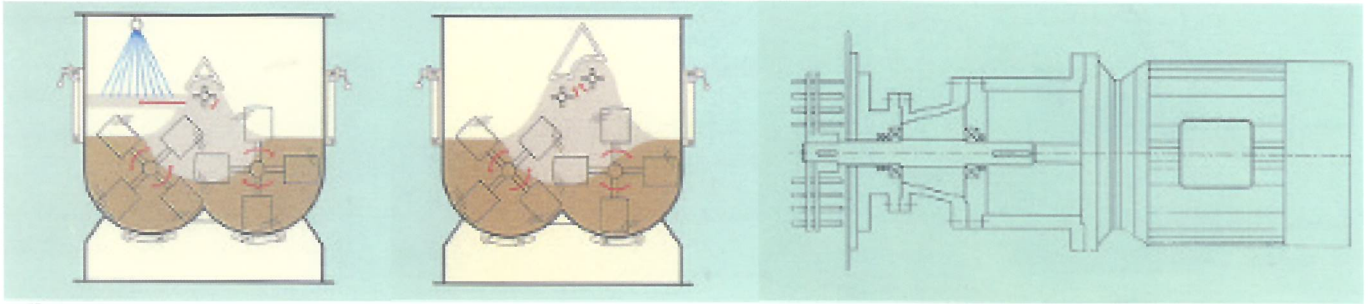
Each of the two shafts in the mixing chamber rotates in opposite directions. The paddles linked to each shaft convey the mixed material to different directions according to the constant peripheral speed, allowing fluid beds to be formed immediately. The raw material moves from the bottom toward the upper central part of the mixer. This results in an increase in the effective volume of the mixing chamber, thus reducing the collision and friction between the materials. Due to the reduced area of contact between the materials and the mixing chamber, no bump damages the materials, the particle shape is maintained, and no pressure is given to the mixer drum or outlet. This avoids the possible loss of the material surrounding the shaft seal and offers fast and precise material mixing.

Outstanding Features

1. Fluidized Zone mixing
2. Homogeneous mixing
3. Gentle mixing
4. Short-time mixing
5. Economical mixing



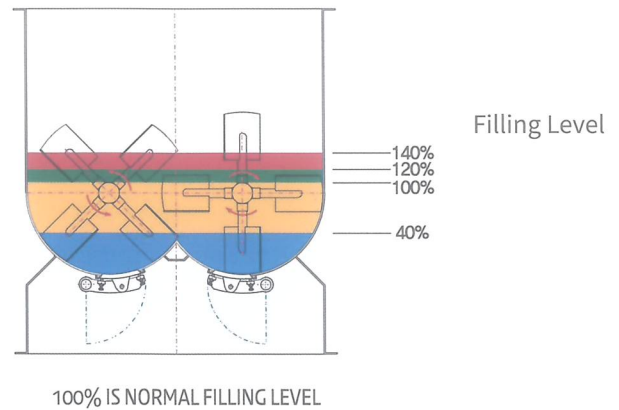
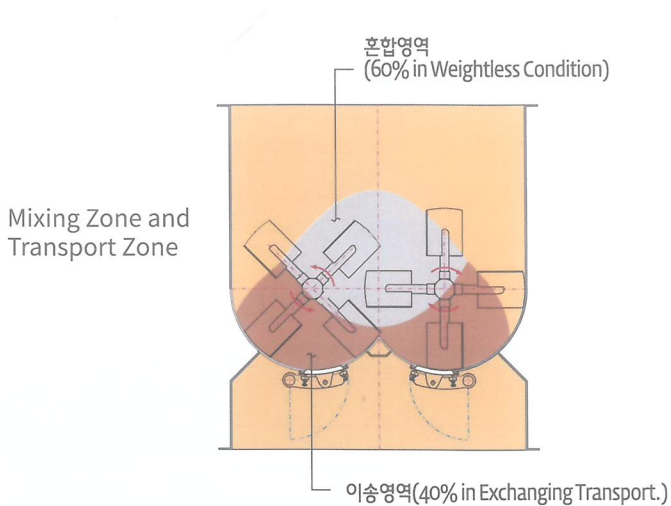
Optional Accessory



1. F.D.B. System
(Liquid Addition & F.D.B. System)

2. Pin Mill System
(P.M.S.)

3. New Power Chopper System
(N.P.C.)



Prevention against Wear / Tear and Sticking



1. Prevention against Wear/Tear

During the mixing process, cement or sand used for hard materials may generate friction between the inner walls or inner structures of the mixing chamber, leading to shorter equipment service life.

The Non-gravity Mixer can guarantee longer life because it is made of high-wear-resistant materials like Hi-Cr or Hardox steel and is coupled to the lined and bolted inner walls of the mixer as well as to the tips of the paddles.



2. Prevention against Sticking

When high-viscosity liquids such as molasses are added to the material, sticking with a considerable amount of the material often occurs with the mixing chamber. However, due to the fact that the gravity-free mixer is lined and coated by materials with good release properties such as U.M.L sheets and Teflon coating, not only can it prevent the possible loss of the material but also enhance product performance and efficiency in working environments(i.e., easier cleaning).

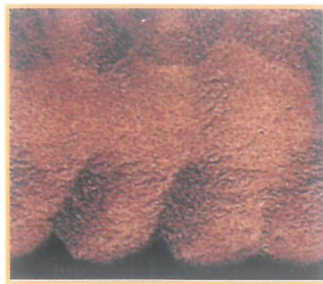
Example of mixing



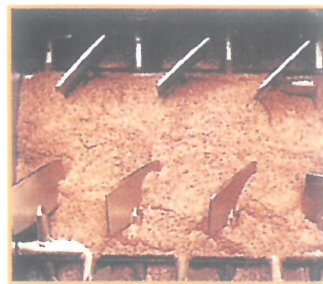
Before start



After 2 seconds

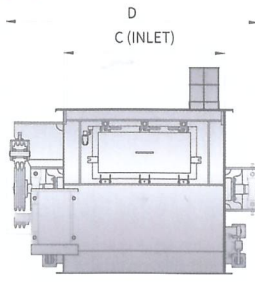


After 5 seconds

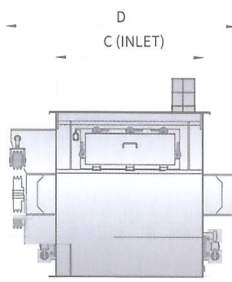


After 10 seconds

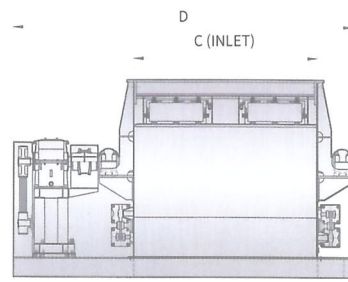
Dimension



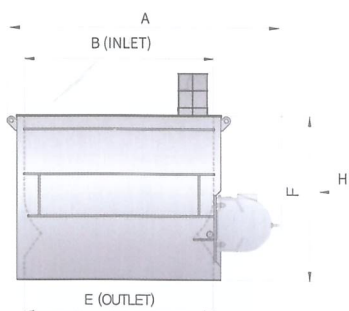
VIEW-H



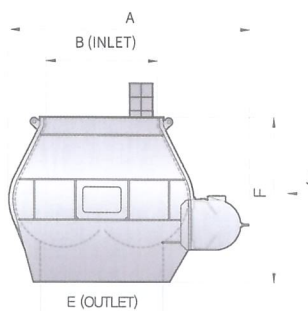
VIEW-J



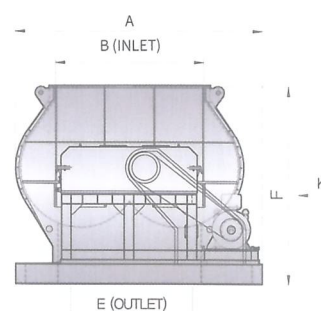
VIEW-K



F-20 ~ F-500



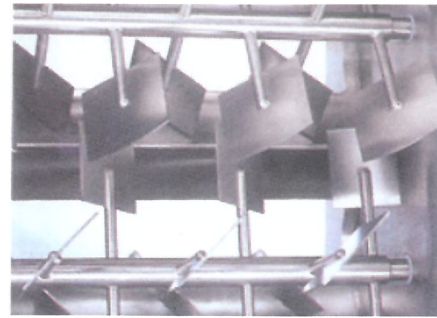
F-750 ~ F-2500



F-3600 ~ F-8000

MODEL	WORKING VOL.	A	B	C	D	E	F STD**	F HIGH**	MACHINE WE-GHT(KG) ***
F-20	20	660	470	400	900	470	485	655	250
F-60	60	960	680	570	930	680	810	810	300
F-120	120	1110	840	720	1140	840	810	930	650
F-200	200	1310	1000	850	1300	1000	950	1150	850
F-350	350	1630 1800	1250	1000	1550	1250	1100	1300	1250
F-500	500	1800 1850	1360	1160	1630	1360	1180	1380	1600
F-750	750	2100 2150	1000	1320	1915	1000	1480	1680	2500
F-1000	1000	2200 2300	1250	1450	2300	1110	1560	1760	3500
F-1500	1500	2530	1260	1675	2350	1150	1725	2050	4500
F-2000	2000	2930	1500	1870	2580	1450	2040	2300	6000
F-2500	2500	2500	1620	1980	3350	1550	2100	2420	7000
F-3600	3600	2900	1750	2320	3850	1600	2500	2500	8000
F-5000	5000	3150	2000	2500	4100	2000	2500	2500	10500
F-6000	6000	3350	3250	2700	4200	2250	2500	2500	12000
F-8000	8000	3730	3540	3010	4550	2450	2500	2500	13000

Discharge Door



Typical Application

FOOD

Aspartame
Baby formula
Brown sugar
Cake mixes
Cereals
Cereals/Fruit
Cheese powder
Coffee
Confections
Corn starch
Crystal drinks
Doughnut mix
Dried soups
Flours
Fruit mixes
Grains
Granola
Herbs
Licorice
Meat preparations
Meusli cereals
Milk powder
Mixed Nuts
Potato flakes
Oxtail soup
Raisins/Flakes

Rice

Saffron mix
Salads
Salt tablets
Snack foods
Spices foods
Spices
Sugars
Vanilla powders
Fresh vegetables
Frozen vegetables
Vitamins

CHEMICALS

Boric Acid
Boric Oxide
Carbon
Chalk/Talcum
Cleansers
Cosmetics
Detergents/Bleach
Detergents/Wax
Graphite/Carbon
Fertilizer
Fly Ash
Fungicides
Paints

Pest Moss Mixes

Pesticides
Soda Ash
Toiletries

CERAMICS

Glass batch
Cement/Clay
Clay/Sand
Glazess
Pumice
Refractories

DRY MORTAR

Brick facings
Cement/Gibbers
Concrete
Crushed marble
Drilling mud
Flooring materials
Grouts
Gypsum
Joint compounds
Lime
Mortar mixes
Pre-mixed cements

Road lining materials

Thermosetting paint
Wall plasters
Wallpaper pastes

PLASTICS

Plastic additives
Polyethylene
Polymers
Polypropylene
PVC Chips
Resins

METAL POWDER

Metal Oxides
Copper/Graphite
Iron powder/Graphite
Magnesium
Stellite powder
Titanium
Zinc powder

FEEDS

Dairy additives
Farm feed

Fish food

Pet food
Zoological food

FOUNDRY

Core sand
Moldind sand
Sand/Bentonite

RUBBER

Ground Rubber
Carbon Black
Talc

OTHRT

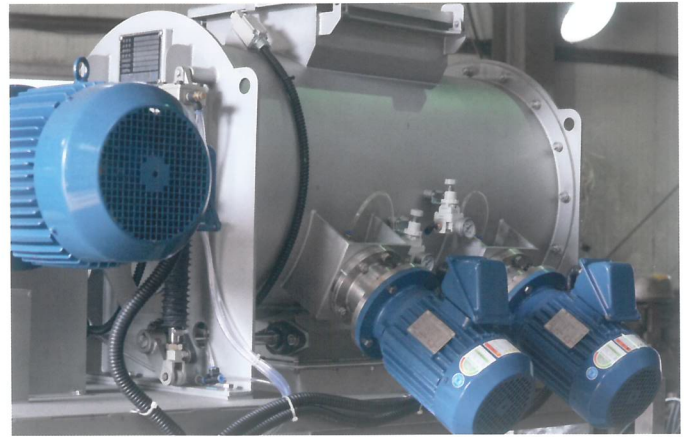
Carpet freshener
Electrode mass
Fish medicine
Pharmaceuticals
Pot-pourri
Pyrotechnics
Wood chips



Shovel Mixers

Shovel type the mixer places a unique plow-shaped shovel in a horizontal drum and gives the mixture a state of three-dimensional flow by centrifugal diffusion and vortex action by its shape, installation angle, and rotation speed. Various unit operations such as mixing, cooling, heating, humidifying, pressing, assembling, and coating can be performed simultaneously or sequentially.

Also, depending on the raw material, a chopper may be installed and crushed to further improve the degree of mixing.



Outstanding Feature

- Precision blending in a short time
- lumpless humidifying blend
- Grinding mixing of fiber and powder
- uniform particle formation
- uniform coating on the particles
- Easy system layout and automation before and after mixer

Dimension

Model	Full Volume (m ³)	Power Of Motor (kw)	Spindle Speed (rpm)	Over Dimension(mm)			Weight (Kg)
				Length	Width	Height	
SSM-0.1	0.1	1.5~3.7	161	1530	910	830	430
SSM-0.3	0.3	3.7~11	132	1960	1090	1020	950
SSM-0.5	0.5	5.5~15	85	2180	1240	1200	1100
SSM-1	1	7.5~30	85	2830	1650	1570	1800
SSM-1.5	1.5	11~37	85	2830	1840	1770	1900
SSM-2	2	15~45	57	3420	1840	1770	2520
SSM-4	4	18.5~55	57	4130	2180	2140	4836
SSM-6	6	22~90	57	4640	2310	2460	8775
SSM-8	8	37~90	42	5430	2470	2620	9360
SSM-10	10	45~110	33	5530	2990	2850	9750
SSM-12	12	45~10	33	5820	3210	2970	10660
SSM-15	15	55~160	33	6020	3360	3160	1150

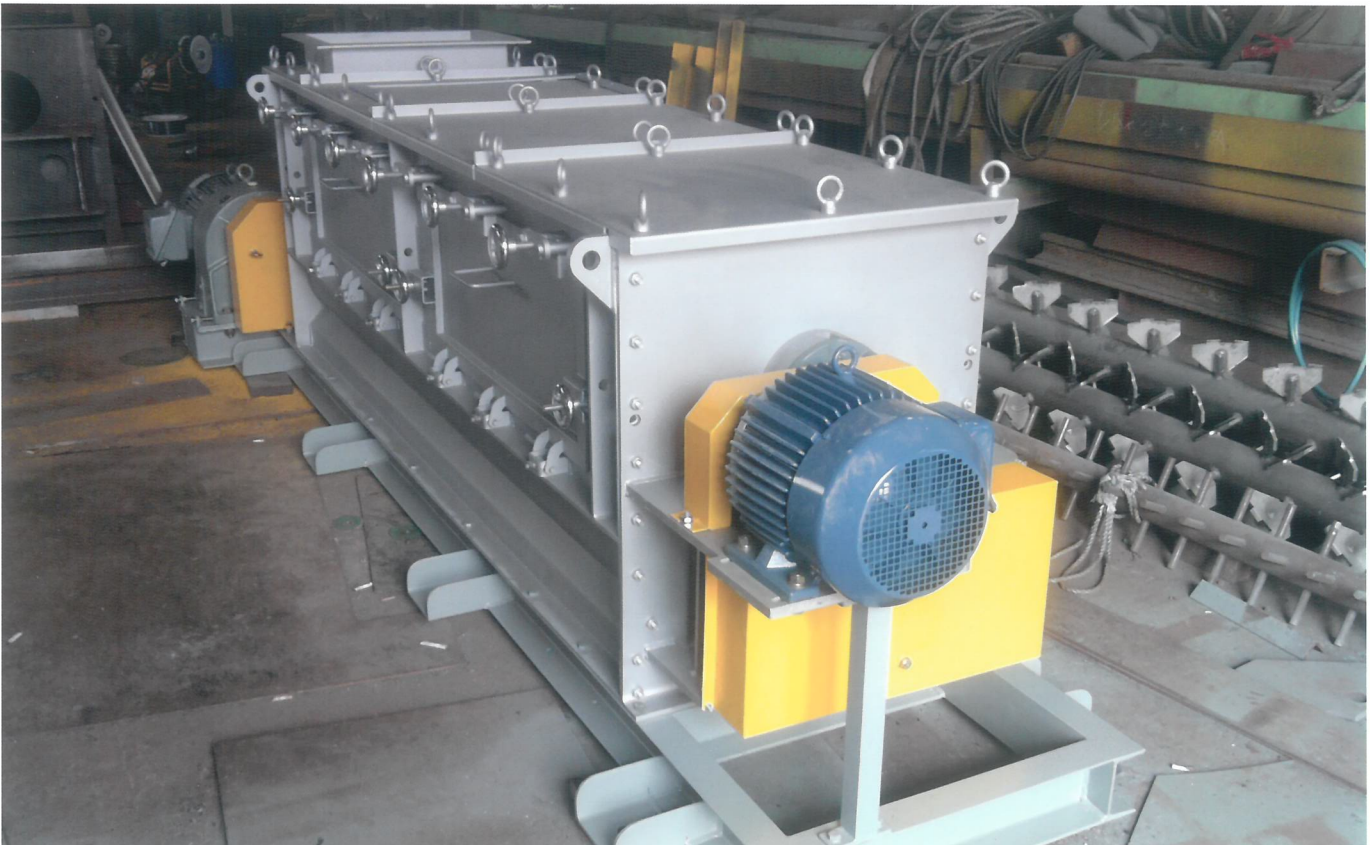
Continuous Non-Gravity Mixer

This continuous mixer is designed so that the body is designed with a double U-shaped structure so that the paddle mixes the product evenly as it eliminates the stagnant part of the production of the double U-shaped product. The mixer can be designed and manufactured according to the characteristics of the raw material and the application.

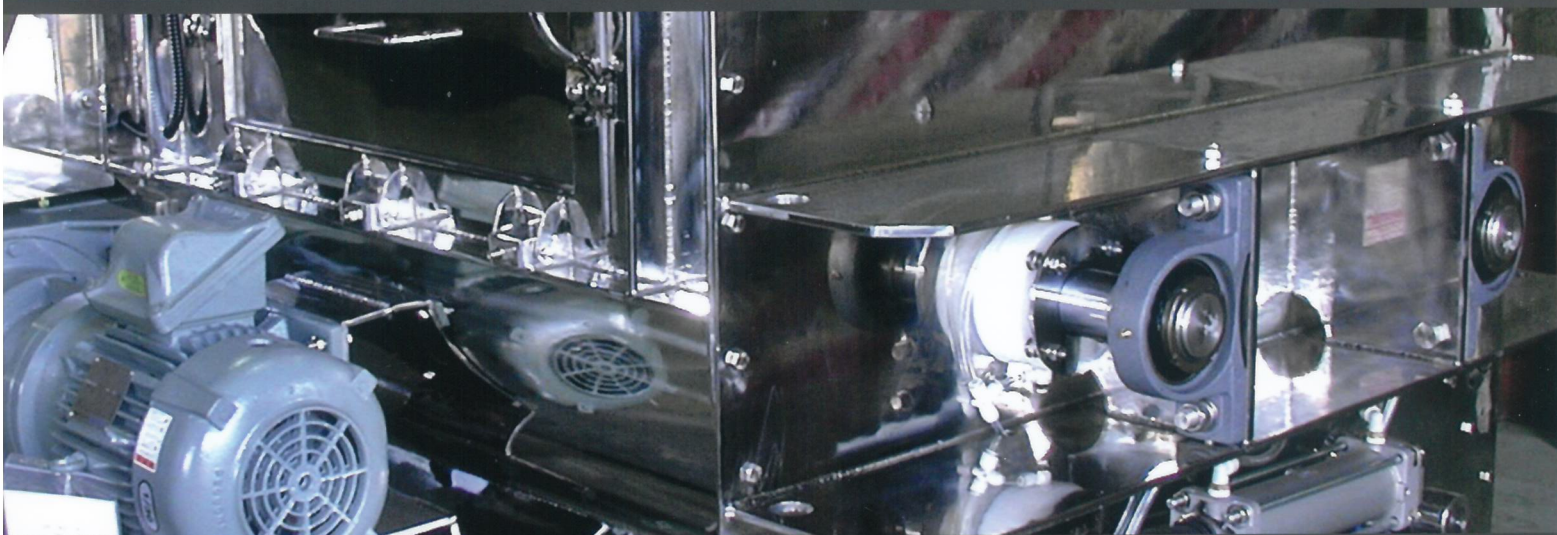
Spraying of the liquid, a throttling plate to maintain the proper amount of residue, and an inlet that is required at the top of the facility.

Outstanding Feature

- It is easy to mix raw material with big difference in particle size or specific gravity.
- Mixing of fragile raw materials is possible.
- Smaller installation area than other continuous mixer
- Easy to produce continuous varieties
- Facility is simplified due to no need for complex facilities
- Easy to mass production as well as small production sites
- Other mixing machine



nwe millennium, new spirit



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