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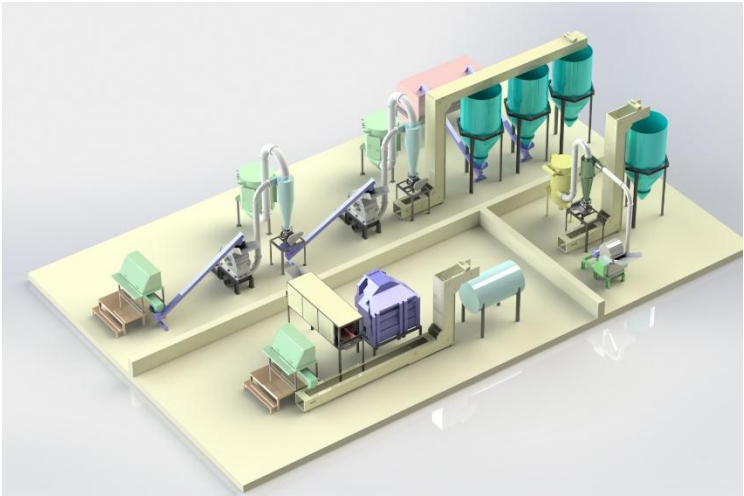
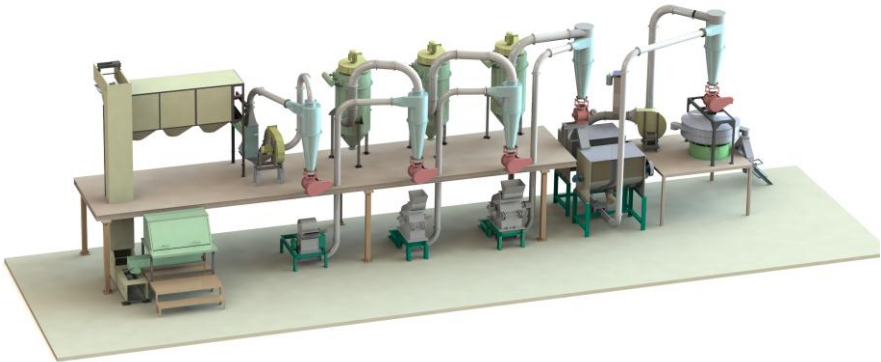
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About LithoTech Engineers

LITHOTECH ENGINEERS was registered in the year 1993 as a SSI Unit and started the actual production in the year 1994.

From the very inception, the objective was to provide simple and cost effective solutions in the field of size reduction technology. We have been very innovative in our approach and are proud to claim that we have not sold just machines but provided optimum solutions. We have a very exhaustive experience of over two decades of providing machineries to process various products major being Spices, Ayurvedic Herbs Roots, Herbal products, Sugar for various applications such as confectionery, Bakery. Homeopathic medicines, Biscuit etc., Food colours, pharma, etc.

Presently our major focus is the spice industry which has not seen a major technological upgradation for the many years. Initially, we began with providing only grinding machinery however gradually we have developed and we now provide complete end to end turnkey solutions with complete automation.

We had started off very humbly with a small 700 Sq Ft. Unit in Vasai but as of now, we have a 4000 sq Ft. Production unit in Vasai (Suburbs of Mumbai)with a strong vendor base to cater to excess demand. Further, we have a sprawling 45000 Sq Ft. in Sitarganj (Uttarakhand) which is in production since January 2011. Through this unit we have effectively executed very big projects and also we have been able to provide prompt services to our clients in north India.

In the food industry especially the spice sector there has been a special thrust on the quality standards being maintained the food processing industry. Various quality certification agencies have started providing their services as that assists the processor to easily market their product and also get a better price for the same. LITHOTECH ENGINEERS has been continuously working and developing on this front and ensured that our machineries fulfill all the quality norms set by the agencies. WE have provided customized cost effective automation and increased the overall productivity. And for us, it is an unending process.

To further develop the confidence of our clients we also have a trial demonstration facility where clients can test their material and verify the results before actually placing the order. Also, we have a few co-operative clients who allow our prospective clients to see the plant in running condition. This gives our clients more clarity about our machineries and also the processes.

We have supplied our equipments through out the world the major being, Bangladesh, USA, UK, Saudi Arabia, Qatar, Bahrain, Oman, Tanzania, Malaysia, Singapore, Mauritius, Sudan, Nigeria, etc.

Our strength lies in our strong design expertise with vast experience to provide optimum solutions for your specific requirement in processing your products.

Size Reduction
Equipments

Batching System

Drying and Roasting

Blending

Sieving

Conveying and Feeding

Industries we Serve



Spices



Ayurvedic Herbs & Roots



Food Colours



Chemicals



Minerals



Pharma

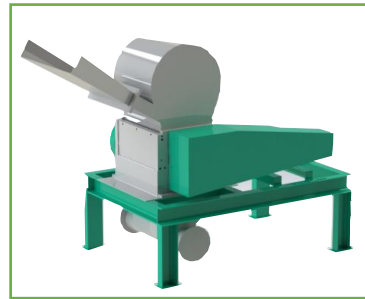


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Size Reduction Equipments



Hammer Mill



Chopper



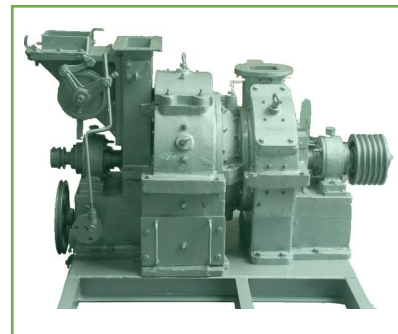
Pin mill



Ultra Fine Mill



Micro Pulveriser



Impex Mill



Air Swept Mill

Hammer Mill



The most versatile machine that is used to grind almost all materials like spices, foodstuffs, chemicals, ayurvedic herbals, minerals and other miscellaneous materials.

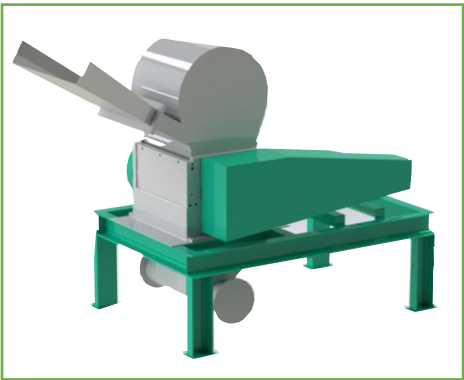
The grinding takes place between the high speed swinging hammers and top/side liners. Once the particle size reduces to that of the perforated screen at the bottom, it will be discharged through the hopper.

The fineness of the material can be controlled by changing the speed of the rotor (hammer), content of serrations on liners, number of hammers and diameter of perforation on the screen.

Models	FC-1206	FC-1508	FC-1512	FC-2215	FC-2221	FC-3621
Power (H.P.)	10	20	30	40	60	75
Capacity (Kgs/Hr.)	50-60	100-125	200-250	300-350	400-500	600-1000
Fineness Achievable	Upto 100 Mesh BSS					

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Chopper



Chopper has been specially designed for granulating & cutting various materials like foodstuffs, agro, ayurvedic herbs, etc. into small pieces of required size with minimum of powder content. There is no heat generation while grinding thereby retaining important properties like aroma taste flavour and colour.

Some typical applications are making crushed chillies for pizza toppings, chopped / minced / granulated onions, tea-cut herbal products, granulating of food colours, gum, asafoetida, crushing of various ayurvedic herbs for Extraction purpose, etc.

Models	FCH-8	FCH-12	FCH-16	FCH-24	FCH-32
Power (H.P.)	3	5	7.5	20	30
Capacity (Kgs/Hr.)	75	150	300	800	1200
Fineness Achievable	1mm to 5mm with minimum powder				

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Pin mill



This machine is used for very soft materials like sugar, salts, chemicals, dyestuffs, etc for medium fine to fine grinding. This material is centrally fed into the machine chamber. The grinding takes place between a high speed rotor consisting of a large number of pins and a stationary stator. The discharge takes place through the perforated screen throughout the periphery.

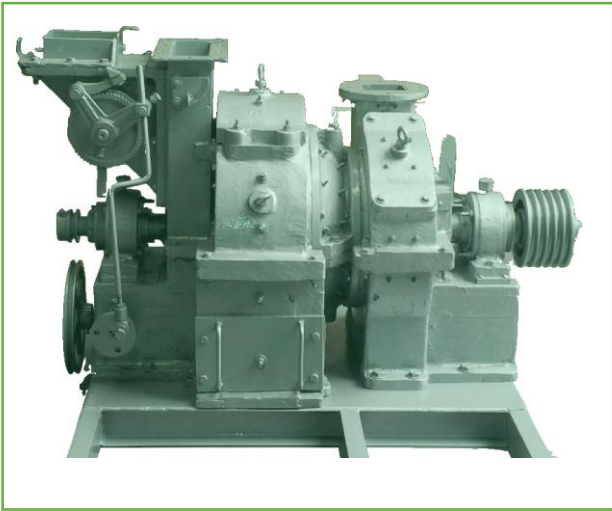
Models	FPP-300	FPP-450
Power (H.P.)	10	25
Capacity (Kgs/Hr.	150-200	400-450
Feed size (mm)	15	15
Fineness Achievable	30 to 120 Mesh BSS	



This is a screenless pulveriser used for grinding soft to medium hard materials into super fine powder. The machine have built-in water jacket to keep down the temperature in the machine chamber.

This machine is generally used for superfine grinding of food dyes, industrial dye intermediates, pharmaceuticals drugs, chemicals, etc. The feed is through the feeder screw that feeds material centrally into the machine chamber. The grinding takes place due to attrition between a high speed rotating rotor having six wear resistant tips and side liners on both side of the tips and also a turbo effect. The annular gap plate controls the flow of materials through the mill. In other words it regulates the fineness of the material. The powder is discharged through the bottom hopper.

Models	FUM-300	FUM-400
Power (H.P.)	10 + 0.5	20 + 0.5
Capacity (Kgs./Hr.)	50-75	125-150
Max. Feed size	Upto 6 mm	
Fineness Achievable	150 to 300 Mesh BSS	



Impex Mill is a screenless pulverizer suitable for grinding hard and brittle materials like turmeric, minerals, etc. to a fineness of 100 to 300 Mesh BSS. It is done by continuous impact of rotating hammers against grinding liners. The raw material is fed into the rotary feeder from inlet hopper and spills into the grinding chamber. Strong hammering action breaks lumps into small particles. At the same time the blower sucks the air towards the whizzer classifier. Whizzer classifier doesn't allow oversize particles to pass and returns it into the grinding chamber, where after regrinding the desired fineness is achieved.

Models	FIM-15	FIM-22	FIM-25	FIM-32
Power (H.P.)	10	20	30	60
Capacity (Kgs/Hr.)	50	100	200	400
Fineness Achievable	Upto 100 - 250 Mesh BSS			



It is utilized for soft materials like chemicals, dyestuffs, foodstuff, pharmaceutical, bulk drugs, etc. for fine grinding. Since the machine is used vastly for chemicals & bulk drugs and other heat sensitive materials, it has a built in water jacket to control the temperature in the grinding chamber.

The grinding takes place through attrition between the high speed swinging hammers and the serrated liners. Due to the very high speed and a small chamber, a higher fineness is achieved as compared to hammer mill.

Models	FMP-1	FMP-2
Power (H.P.)	7.5 + 0.5	15 + 1
Capacity (Kgs/Hr.)	100	200
Fineness Achievable	100 to 200 Mesh BSS	

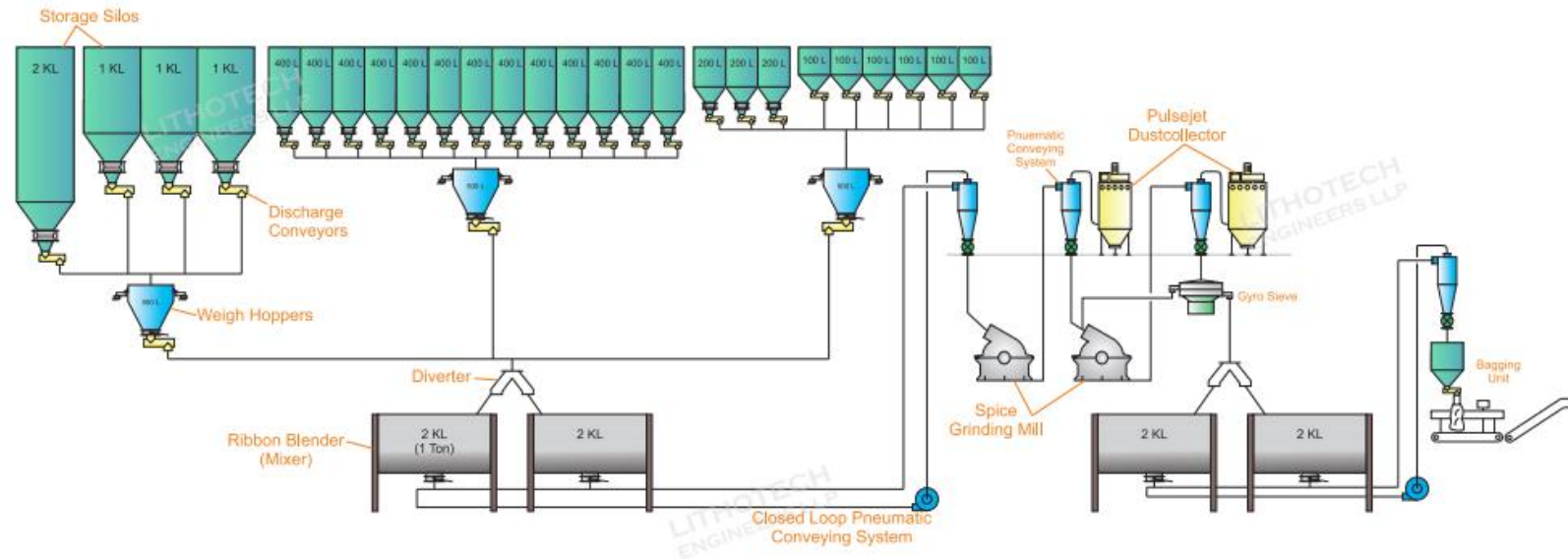


Air Swept Mill is a screenless pulverizer suitable for grinding brittle and fibrous materials like turmeric. to a fineness of 100 to 300 Mesh BSS. It is done by continuous impact of rotating hammers against grinding liners. The raw material is fed into the inlet hopper and spills into the grinding chamber. Strong hammering action breaks lumps into small particles. At the same time the blower sucks the air towards the whizzer classifier. Whizzer classifier doesn't allow oversize particles to pass and returns it into the grinding chamber, where after regrinding the desired fineness is achieved.

Models	ASM-05	ASM-10	ASM-40
Power (H.P.)	10	20	30
Capacity (Kgs/Hr.)	20	40	175
Fineness Achievable	Upto 100 - 250 Mesh BSS		

Later an image would be provided for this blue block

Batching System



Batching system is used to make a mixture of multiple ingredients according to pre defined proportions.

A Sample Process flow of the system

1. **Silo of 1 Ton (1 unit)** : This Silo would be mounted on the load cell and would indicate the weight of material filled in it. The A complete batch including different ingredients would be made here manually by checking the weight of each item while filling.
2. **Vibratory Feeder (1 unit)**: This Feeder would be placed each at the bottom of the Silo to feed the material in the Z Type Elevator.
3. **Z-Type Elevator**: This would carry the material from the discharge of Vibratory feeder and will convey to the Mixer via the Diverter.
4. **Y – Diverter**: This would be mounted at the outlet of Z Elevator. It would be pneumatically operated by manual solenoid valve and would alternately feed the 2 Mixers
5. **Mixer 750 Kg (Twin)**: This would thoroughly mix the Ingredients received from the weigh hopper. It has 10HP main motor of Mixer. The discharge valve below it is of Flap type operated by pneumatic cylinders, which while in closed condition doesn't allow any material to get accumulated over it.
6. **Collection Hopper (1 Ton)**: This would be mounted below the 2 mixers and would take the discharge from both of the mixers
7. **Screw Conveyor (1 unit)**: This would convey the material from outlet of Collection Hopper and would feed at the inlet of Bagging Station.
8. **Bagging Station (1 Unit)**: The bags of 50 Kg each would be filled here it consists of two outlets for each where the material would come alternately. While one bag is getting filled the 1st outlet, the 2nd would be stopped and will be replaced with a new bag manually. The Weight scale is placed each below the two outlets which would automatically weigh 50 Kg and then switch the discharge to the other outlet.

Later an image would be provided for this blue block

Drying and Roasting



Tray Drier



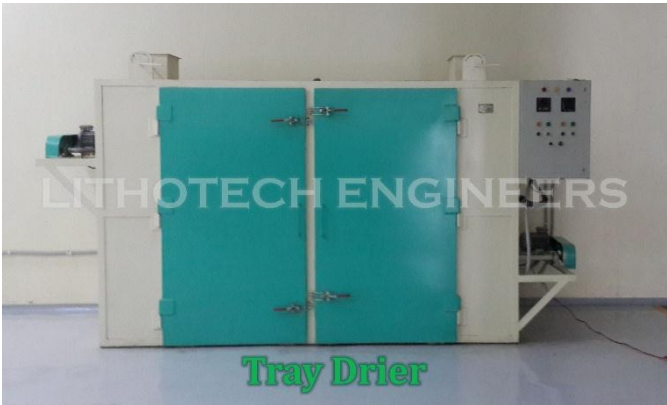
Rotary Roaster



Blender cum Roaster

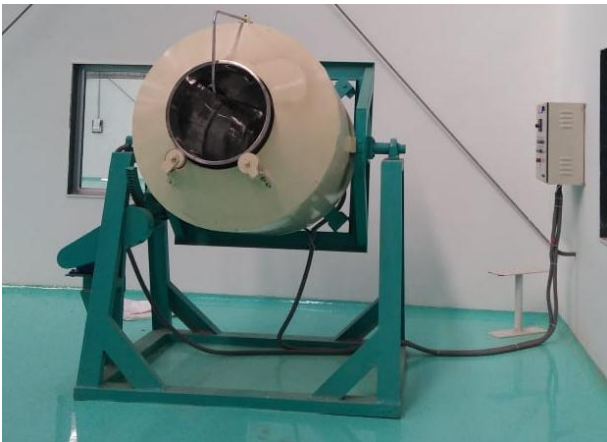


Rotary Cascade Drier



- Tray drier is an Insulated Chamber within which hot air is continuously circulated. Forced convection heating takes place to remove moisture from the solids placed in trays.
- Trolleys containing trays are dragged inside the drier.
- Electrical heating elements are used to generate heat inside the drier.
- Heaters automatically switches off when the required temperature is achieved.

Model	FTD-48	FTD-96	FTD-192
No. of Trays/Trolley	48 / 1	96 / 2	192 / 4
Work space (WxDxH)	40" X 36" X 72"	77" X 36" X 72"	77" X 72" X 72"
Heating Load	9 KW	18 KW	42 KW
No. of Blowers (Axial)	2 Nos.	2 Nos.	4 Nos.
Doors	Single	Double	Double
Motor for blower	1 HP, 1440 rpm, Foot mounted.		
Electric Supply	415 V AC, 3 Phase, 50 Hz.		
Tray Dimension	32" X 16" X 1.25"		
Control Panel	Automated digital control panel.		
Heater	Tubular GI Finned		
Maximum Temperature	100 °C		
Insulation	3" thick Rock wool		
MOC - Body	S.S. / <u>M.S.</u> (As required)		
MOC - Trolley	<u>S.S.</u> / M.S. (As required)		
MOC - Trays	<u>S.S.</u> / M.S. / Aluminium (As required)		



Features

- The Uniformity of product is achieved by 3 dimensional agitation by the agitating blades
- Enables even distribution and roasting of the material, achieving uniformity in the quality of the product, at all the times.
- Downward rotational system that discharge the material at once.
- Products in the drum, even during the short period of their presence in the heater, rapidly undergo roaster due to heat inertia.
- This device has a downward rotational discharge system that minimizes the time spent in the drum and thereby preventing transformation of the product due to the remnant heat in the roaster, avoiding the product from being burnt.
- Comes along with its control panel

Model	FRR-125	FRR-250	FRR-500
Capacity (for coriander)	Up to 10 - 15 Kg.	Up to 25 - 30 Kg.	Up to 50 - 55 Kg.
Electrical Heater	9 KW	15 KW	21 KW
Drive Unit	2 H.P. Geared Motor	3 H.P. Geared Motor	5 H.P. Geared Motor
Supply	415 V AC, 3phase, 50 Hz		
MOC	S.S. 304 contact parts		
Drum Tilting	Automatic with drive unit (optional)		



The Ribbon Blender cum Roaster would roast the Material along with the Blending Process. It is a batch type roaster. The mode of heating is by the electrical heaters immersed in the thermic fluid which is jacketed around the U-Shell of the Blender cum Roaster. It is provided along with control panel within which are its safety features.



ROTARY CASCADE DRYER

General:

The complete drying plant comprises Rotary Cascade Dryer, Air Heater, Dryer Inlet Hood, Exhaust Hood, Exhaust Air Fan & Ducting and all necessary Controls.

Duty:

To Dry about 750 Kg/hr. of Chilly Flakes from approximately 20% initial moisture to 8-10 % final moisture.

Dryer Drum:

3 Ft Diameter X 28 Ft. long dryer drum fabricated in Stainless Steel plate SS-304 , with internal flights and lifters fabricated and bolted to Stainless steel angle sections welded to the shell plates to ensure adequate contact between the drying air and the material being processed.

The drum is fitted with two cast or forged steel tyres, mounted on carbon steel spacer blocks fitted to a reinforcing band. The tyres run on four cast or forged steel support rollers shrunk fit on steel shafts with shaft mounted spherical roller bearing plummer blocks. A segmental cast steel chain ring is fitted around the periphery of the dryer drum.

Support Frames:

The complete dryer drum assembly is supported on two fabricated carbon steel roller support frames, the feed end support frame carrying the locating roller assemblies. Both roller support frames are fitted with safety guards.

Drum Drive:

The dryer drum is driven by a T.E.F.C. electric motor through V-belt drive, gearbox, pinion and chain to the drum drive chain wheel. Motor, gearbox and V-belt, etc. are mounted on a fabricated carbon steel baseplate. All drives are completely enclosed in suitable safety guards.

Air Heater:

The drying air is provided by means of Electrical Operated, firing into a refractory lined carbon steel combustion chamber connected to the dryer inlet end hood. It can also be operated with Electrical Heater of 30 KiloWatts rating.

Inlet End Hood:

The inlet end of the drum is totally enclosed with a Stainless steel fabricated enclosure, complete with labyrinth seal and stainless steel material inlet chute. The inlet hood is supported by a suitable rolled steel section support structure.

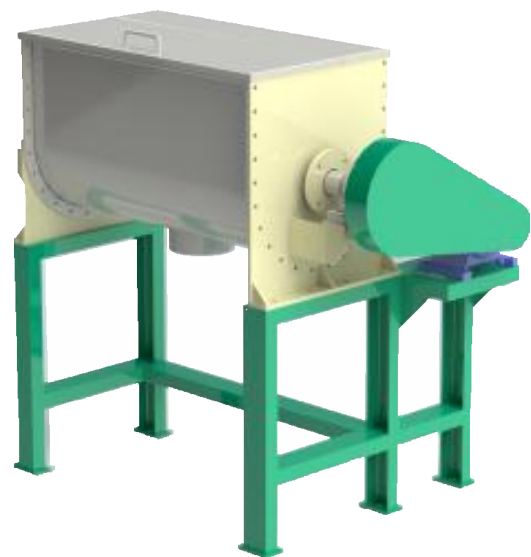
Outer End Hood:

The outer end of the drum is totally enclosed with a carbon steel fabricated hood complete with inspection access door, exhaust air outlet chute. A labyrinth type flexible seal is fitted to the rear hood plates around the drum opening. The outlet end is supported by a suitable rolled steel section support structure.

Exhaust Air Fan:

The exhaust air is drawn from the dryer by a centrifugal fan, complete with electric motor, V-belt drive and drive guard.

Exhaust Air Ducting:



The Ribbon Blender uniformly blends different spices / materials. The dimensions and configuration of the ribbons are carefully balanced to provide a movement of material within the blender that avoids dead spots and gives rapid product discharge.

The outer ribbon moves the material from ends to the centre while the inner ribbon moves it from centre to the ends this cross movements allows homogeneous and a perfect blend.

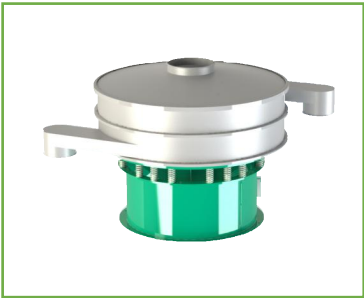
It is manufactured in Stainless Steel Contact parts.
Note: Models above FRB-250 are ‘no load start’



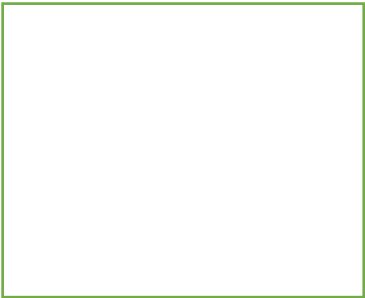
Models	FRB-125	FRB-250	FRB-500	FRB-750	FRB-1000	FRB-2500	FRB-4000
Volume (Litres)	125 L	250 L	500 L	750 L	1000 L	2500 L	4000 L
Capacity (Chilly / Coriander powder)	50	100	200	300	500	1000	2000

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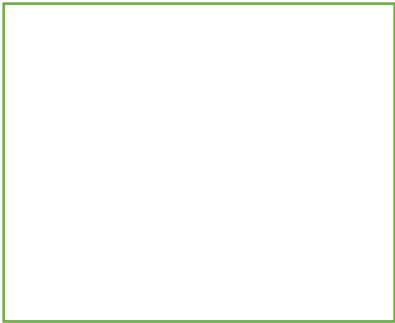
Sieving



Gyro Sieve

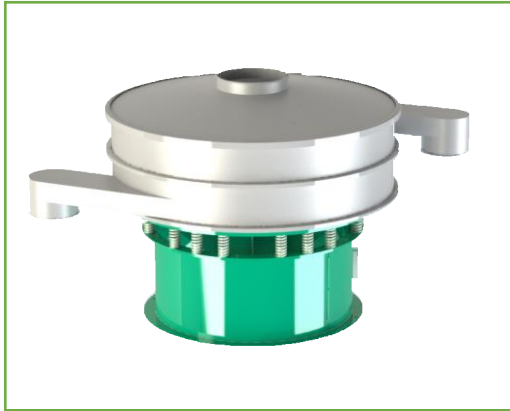


Rotary Sieve



Centrifugal Sieve

Gyro Sieve



Gyro Vibratory Sieve Separator are self-constrained, compact, production machines which make precise mechanical separations according to particle size through efficient use of multiplane inertial vibrations techniques. They are designed and built to solve the most difficult classifying, separating and dewatering problems.

Material to be screened is fed to the top screen. Oversize particles are moved by the multiplane motion to the screen periphery where it gets discharged. Undersize particle or liquid passes rapidly through the screen. Gyro Sieve Separators are equipped to handle upto three screens

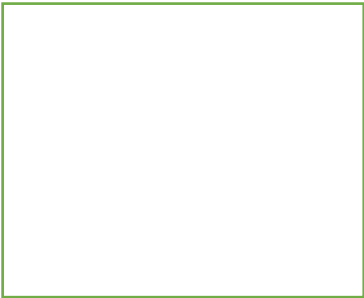


The 3 dimensional inertial vibration of Gyro Vibratory Sieve Separator is based on a principle in which motor rotation imparts vibration to the entire screen assembly in both vertical and horizontal planes.

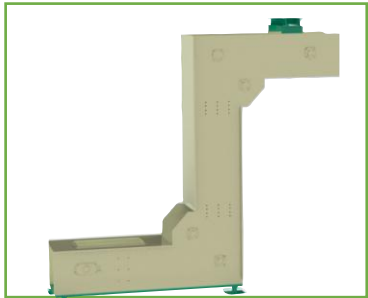
Models	FGS-600	FGS-750	FGS-900	FGS-1200	FGS-1500	FGS-1800	FGS-2400
Power (H.P.)	0.5	0.75	1	2	3	5	7.5
Diameter of Deck (mm)	600	750	900	1200	1500	1800	2400
Capacity	Will depend on screen size and feed material properties.						

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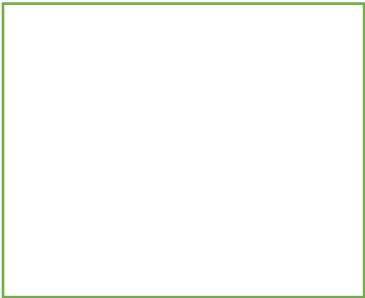
Conveying and Feeding



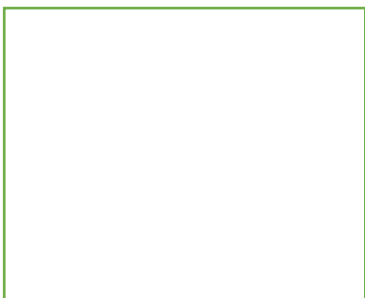
Pneumatic Conveying



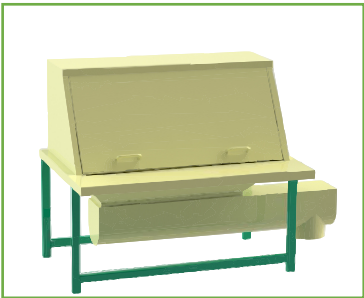
Z Type Elevator



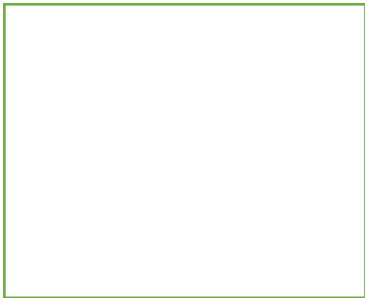
Screw Conveyor



Belt Conveyor



Dumpbooth



Tote Bins



Vibratory Feeder



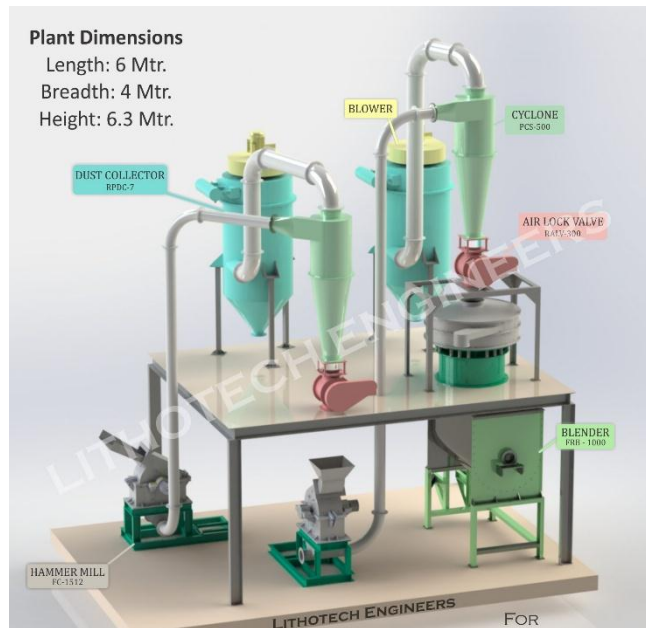
3 Stage Spice Plant



3 Stage Spice Plant with Chilly Cleaning



Reverse Pulsejet Dust Collectors



Layout of 2 Stage Grinding system



Single Stage Plant



Impex Mill

Videos

All 4 Videos from the below channel

https://www.youtube.com/channel/UC7imnTJVMuja_MNkhUVpmsA

Appreciation Letter



Mesh Chart

Sieve Mesh Chart			
APERTURE SIZE			
B.S.S(410/1969)	A.S.T.M. (11-70)	I.S. (469/1972)	MICRONS
4	5	4.00mm	4000
5	6	3.35mm	3353
6	7	2.80mm	2812
7	8	2.36mm	2411
8	10	2.00mm	2057
10	12	1.70mm	1700
12	14	1.40mm	1405
14	16	1.18mm	1180
16	18	1.00mm	1000
18	20	0.850mm	850
22	25	0.710mm	710
25	30	0.600mm	600
30	35	0.500mm	500
36	40	0.425mm	425
44	45	0.355mm	355
52	50	0.300mm	300
60	60	0.250mm	250
72	70	0.212mm	210
85	80	0.180mm	180
100	100	0.150mm	150
120	120	0.125mm	120
150	140	0.106mm	105
170	170	0.090mm	90
200	200	0.075mm	75
240	230	0.063mm	63
300	270	0.053mm	53
350	325	0.045mm	45
400	400	0.037mm	37
500	500	0.025mm	25

Download catalogue

- ☐ Corporate Brochure
- ☐ Tray Drier
- ☐ Rotary Roaster
- ☐ Masala Mill
- ☐ Batching System


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Company

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