

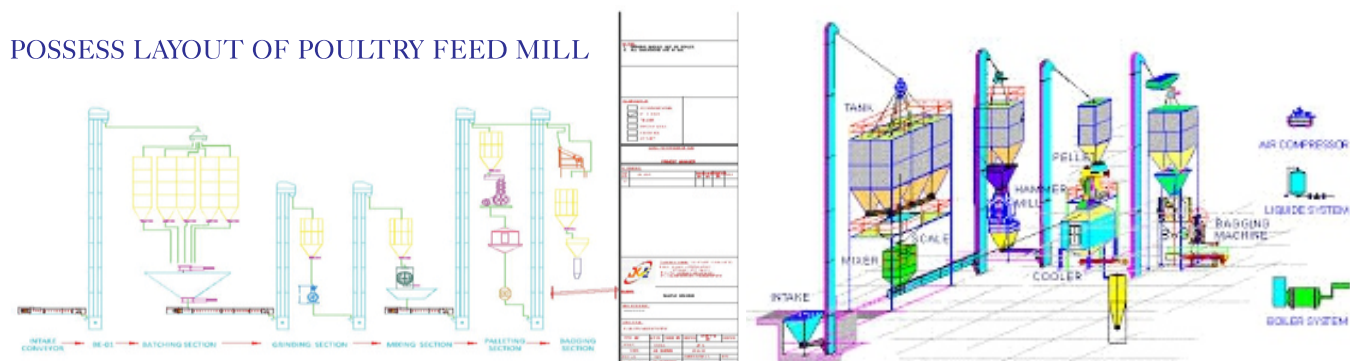
**JAI KRISHNA
ENGINEERING**
manufacturer, supplier & exporter
A Promise of Excellence

*Good Food Brings with
Good Feed*

POULTRY & CATTLE FEED PLANT Pellet Mills – Efficient Feed Production

Minimum Structure
High Quality Feeds
Best Value for Money
Low Power Consumption
Maintenance Free

POSSIBLE LAYOUT OF POULTRY FEED MILL



**JAI KRISHNA
ENGINEERING**
An ISO 9001:2008 Certified Company

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Company Profile

Established in the year 2010 at Delhi, we, Jai Krishna Eng., are leading Manufacturers, Traders and Suppliers of premium quality Industrial Machinery. These are manufactured using the best quality of raw materials and components in adherence with industrial standards. These are known for features such as durability, damage-resistance and ease of use. We source raw materials from leading vendors of the market in order to assure clients of the quality of our products. Integration of advanced technology and sophisticated equipment's in our business processes has helped us manufacture high quality products. Highly experienced auditors assess the quality of our products prior to dispatch. These are easy to use, install and service and are supplied to clients in a vast array of specifications. These are highly demanded among various industries for versatile applications.

Innovations

We offer broad portfolio of technology-based solutions built on intelligent innovation. Our company has been credited for introducing the latest technology in the country. Plants based on innovative technology has enabled our customers to enhance their capabilities, while reducing the operational cost. Some of the innovations introduced by us include the following:

- The FIRST to introduce and manufacture the DESOLVENTISER TOASTER in India
- The FIRST to introduce the modern EXPANDER TECHNOLOGY
- The FIRST to integrate REFRIGERATION unit to the absorption system
- The FIRST to Introduce ENERGY SAVING measures in several areas of the plant
- COMPUTERIZED MONITORING of various operations in the solvent extraction plant.

Facilities

JKE has a state of the art Mechanical Designing Facilities Comprising of latest 3D design Software, We have a team of designers having vast experience in the field of feed plant machines designing.

JKE has a Manufacturing facility Spread over 5000 Sq. ft. area with Sufficient Skilled Supervisors & Workers which allow us to produce machine with optimum finishing and timely delivery.

We have a capable erection and commissioning team headed by experienced supervisor that helps us to finish erection work in minimum time.



CATTLE FEED PLANT
Pellet Plants
2 TPH To 40 TPH

Mash Feed Plants
2 TPH to 20 TPH



POULTRY FEED PLANT
Pellet Plants
2 TPH To 40 TPH

Mash Feed Plants
1 TPH to 20 TPH

SCREW CONVEYOR

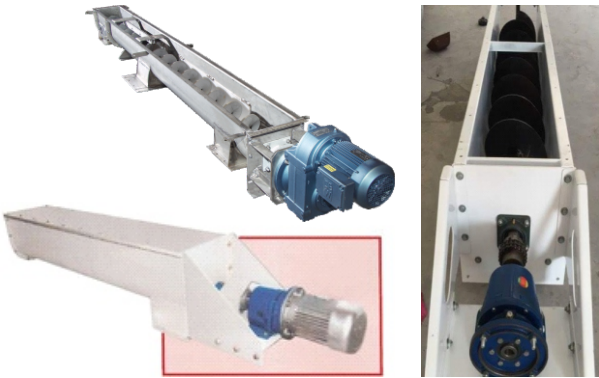
DESCRIPTIONS:

- Dust-free and odorless handling due to the possibility of completely sealing off the trough
- Simple integration into an overall system, since the product can be charged and discharge at any point
- Space - saving design

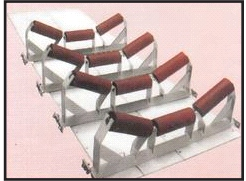
FEATURES

- Dust-free
- Damage-resistant
- Durable
- Rust-resistant

We are involved in the manufacture of the best quality of **Screw Conveyor**. Manufactured in accordance with industrial quality standards, these conveyors are known for being durable and damage-resistant. These require dust-free and odorless handling in order to avoid the possibility of completely sealing off the trough. These conveyors have rust-resistant belts and are light in weight. Equipped with a high load bearing capacity, these are commonly used material handling equipments.



BELT CONVEYOR



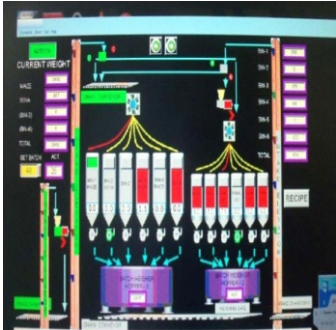
FEATURES

- Damage-proof
- Reliable
- Dust-free
- High-performance
- Moisture-resistant
- Hygienic
- Flexible
- Reliable
- Durable

We have established our presence in the market due to our efficient and skilful manufacture of **Belt Conveyors**. These are a method of continuous material handling used in plants which guarantee top notch performances, irrespective of the type of product handled-delicate or corrosive. These conveyors carry products gently as well as in an efficient and reliable manner. Economical, frugal and flexible handling of products is facilitated through these conveyors. These are high-performance conveyors. Their traction carriers are moisture-resistant and damage-proof.

AUTO BATCHING EQUIPMENT

AUTO BATCHING\ PROPORTIONING SYSTEM For the production of quality feed, it is of utmost importance that all the ingredients and micro ingredients (vitamins, additives and trace elements) are measured in weight with high precision so that the desired percentage of each can be ensured in final feed. As the no. of ingredients and volume of production increases, it necessitates that the automatic weighing of all the ingredients is carried out. It generally consists of two set of proportioning bins with individual weighing hopper scale, one for major ingredients and second for micro ingredients. There may be any no. of bin from 2 to 20 for each set with suitable capacity and higher accuracy of weighing is required for micro ingredients. Auto weighing of liquids, fat, and oil can also be incorporated to the mixer.



PROPORTIONING OF FEED INGREDIENTS (MAJOR INGREDIENTS) In this all the silos are filled by elevator distribution conveyors, or product distributor. Bins are equipped with level measuring and indicating sensors and have screw feeders or gravity feeder under neath each bin. All the bins are discharged in weigh hopper mounted on load cells by controlled movement of feeders.

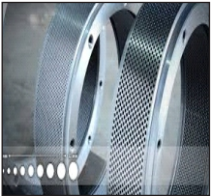
WORKING The desired formulation is entered in the electronic controller and each ingredient of a product formula is individually selected. Now screw feeder associated to this ingredient is started. It is operated in two modes- coarse and fine. When coarse weight is achieved, the system switches over to fine mode for accuracy of weight. After weighing of one ingredient ,system switches over to next ingredient and so on. When weight of complete batch is achieved, then weigh hopper outlet gates are opened to discharge into receiving hopper which has a transfer conveyor for feeding to next section for further processing. All or few of bins are provided with bin vibrators or suitable devices to break the jamming of bin while discharging



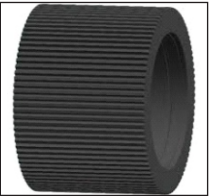
SPARE PARTS



PELLET DIE



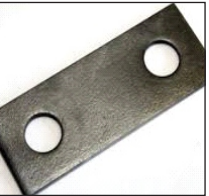
ROLL SHELL



HAMMERS



SCREENS



PELLETING EQUIPMENT

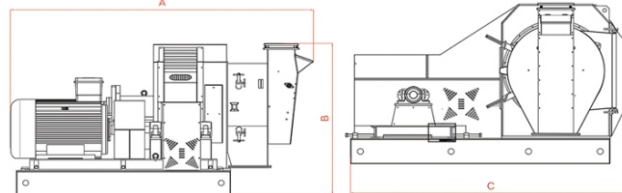
PELLETING Pelletizing is a process in which mixed feed in powder form is converted into pellets by mechanical compression in combination with moisture and heat. Process is achieved by a set of rolls and die of suitable hole size and shape. As the die & roll rotate, the product passes through the nip of roll and die and pressed into die holes to make pellets.

Superior quality oil seals with hardened wear sleeves.

Robust knife design with stainless post & carbide knife tip.

Heavy duty self aligning spherical roller bearings.

- Dynamically balanced capsule assembly.
- Fixture to remove capsule assembly very easily.
- Total three cutting knife on Machine for better performance & uniform length of pellet.
- Sliding which arrangement on machine for easy removal of die and press roll assembly by which we can reduce die and press roll replacing period.
- Limit switch to avoid damage on machine in case of chocking
- Easy Gear type mechanism for gap adjustment between die and press roll.
- Front chute with door are fabricated form SS.304 with pneumatically actuated over flow flap & Magnet.
- Paddle type Conditioner Fabricated form SS. 304 with reasonably long retention time for Proper Cooking of the Material.
- Variable pitch Screw Feeder Fabricated from SS. 304 with VFD for Flow Control.



Model	Die ID (MM)	Track width (MM)	Tip/Speed (m/sec)	Motor Power (KW)	Die Area (cm2)
JKE 42-12	420	120	4.0-7.0	75-90	1580
JKE 42-14	420	142	4.0-7.0	90-110	1850
JKE 52-14	520	142	4.0-7.0	95-135	2350
JKE 52-18	520	178	4.0-7.0	110-150	2940
JKE 60-14	600	142	4.0-7.0	135-160	2680
JKE 60-18	600	178	4.0-7.0	135-160	3360
JKE63-20	630	200	4.0-7.0	160-200	3600
JKE 66-22	660	220	4.0-6.5	160-200	4600
JKE 66-28	660	280	4.0-6.5	200-250	5800

MIXING EQUIPMENT



FEEDER : The function of Screw Feeder is to stop, supply & regulate the feed from Pellet bin to pellet mill through conditioner. Screw speed is varied by use of A.C. Electronic Variable Frequency Drive. All parts coming in contact with feed are of stainless steel construction.

CONDITIONER Conditioning is a process in which heat, moisture & liquid is introduced to the feed. It consist of a single or double barrel in which one or two agitators revolve & perform the blending action. The retention time in Conditioner can be controlled either by varying the speed of the agitator or changing the angle of agitating blades. It has been generally recognized that proper conditioning will provide following changes:

Product becomes more pliable for pelletizing which results higher output with low power consumption, better pellet quality and enhanced Die life.

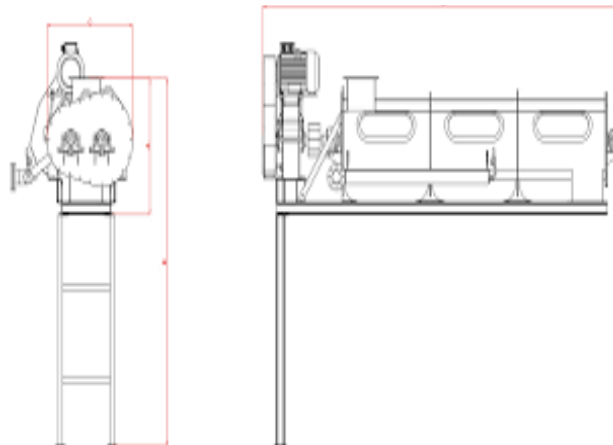
Increase starch gelatinization.

Increased feed temperature promotes the reduction of harmful bacteria such as salmonella

It will have following features :

- Designed to provide retention time of 30 to 120 seconds or upto 240 sec, which can be selected directly from panel.
- Precise control of temperature through automatic control of steam.
- Design will be helicoid screw type which will guarantee first in first out and uniform thermal treatment to each particle.
- All feed contacting parts will be in SS304 construction for higher sanitation and low wearing.
- Up to 20% less energy consumption of the pellet mills as compare to conventional conditioners due to better conditioning.
- Better physical (hardness and durability) and chemical (gelatinization, pathogenic germs, etc.) quality of the pellets
- Better performance of the animals (production as well as health status)

All parts coming in contact with feed meal including barrel, shafts, blades etc. are made of AISI SS-304 Stainless Steel. Large access doors are provided on both sides with toggle clamps for quick and easy inspection, cleaning as well as maintenance. Depending on conditioning requirements, one two or three conditioners may be installed.



COUNTER FLOW COOLER

- Efficient, Trouble Free @ Affordable .
- Octagonal shaped Cooling Chamber
- Improved Moisture control & Low Shock, Tempered Cooling
- No Death Corner
- SS Feeder for Uniform Feeding
- Large Access Door For Maintenance/ Cleaning Purpose
- Height Adjustable Level Sensors To Modify Cooling Time
- Reciprocating Fence for Discharge

CONSTRUCTION It is a rectangular chamber made of SS-304 construction having an Air- Lock on top for entrance of material without air escape and a triple-grid-gate for discharge of material.

A stationary or rotating product distributor is installed to evenly distribute the entering product over product bed. A uniform bed height is maintained inside the chamber which can be increased or decreased to control the retention time by altering the position of level sensor which also initiates discharging mechanism. Atmospheric air is sucked through the product layer by I. D. Fan which has butterfly valve to control the optimum volume of air required for cooling. Air can also be controlled by using a variable frequency A.C. Drive by altering the RPM of Blower. The exhaust air is hot & moist and carries the dust particles with it. Dust is removed from exhaust air by installation of a Cyclone. It works on the principle of centrifugal forces. This has an Air Lock below it.

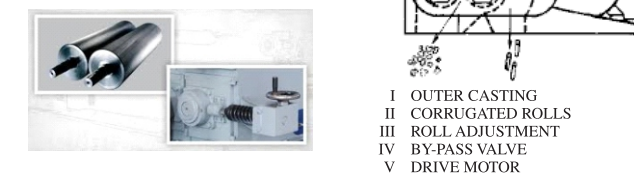
It is very essential to separate dust (fine feed) from exhaust air to avoid shrinkage and air pollution. Properly designed Cyclone with Air Lock at bottom deliver clean air to atmosphere.

- Evenly distribution of pellets to maintain even bed height is essential to avoid uneven cooling.
- Level Sensor can be adjusted up or down to control the height of bed of pellets inside the cooling chamber .to adjust the retention time for moisture removal from the core of pellets and avoid cooling shock.
- Butterfly Valve is provided on I. D. Fan to control the optimum volume of air required for effective cooling.
- Well designed heavy duty I. D. Fan with balanced roto.



S. No.	Model	Capacity (MT/Hours)	Motor Power (H.P.)	I.D. Fan's Motor Power	Overall Dimensions											Approx. Weight in Kg. (Without Motor)	Volume Seaworthy Packing Cu.m.
					A	B	C	D	E	F	G	H	I	J	K		
1	JKEFC-3	4-Feb	1	5	1250	1680	2600	1350	850	165	725	1370	270	580	155	875	10
2	JKEFC-6	7-May	1.5	10	1663	2235	3005	1687	945	282	764	1370	270	610	200	1000	16
3	JKEFC-10	11-Aug	1.5	15	2146	2720	2720	1900	952	471	790	1370	270	987	250	1225	25
4	JKEFC-15	14-16	2	20	2590	3505	3505	3705	1180	588	790	1370	270	1227	317	1450	40

CRUMBLING EQUIPMENT



PELLET CRUMBLERS : Crumbling System, With Two Roller Arrangement To Higher Capacity Crumbler With VFD Operated Feed Rollers For Even Discharge Of Pellets On The Full Length Of The Crumbler Rollers.

Based on superior crumbling technology, Pellet Crumblers offered by us help in avoiding difficulty in producing small pellet feed, thus saving consumption of power & energy. Each pellet contains ingredients that makes feed intake by animal extremely easy. Rolls perform at differential rotational speeds where the pellets are pressed, sheared & torn, thus reaching ideal crumbling effect.

FEATURES:

Contra rotating horizontal rolls
Rolls made from high quality chilled iron of high hardness (Centrifugally casted with longitudinal corrugation (Fluting) pressed in forged steel journals).
Unique feeding hopper & by-pass device (Serves the distribution demands of products as well as serve the needs to by-pass products not requiring crumbling).
When by passing pellets, sometimes automatic stoppage is realized through limit switch.

WORKING METHOD:

Pellets fed continuously over total width of the crumbler by means of discharge device of cooler or an additional feeding device

Fluted rolls of different speeds crush pellets into predetermined sizes

ADVANTAGES OF PELLET CRUMBLERS:

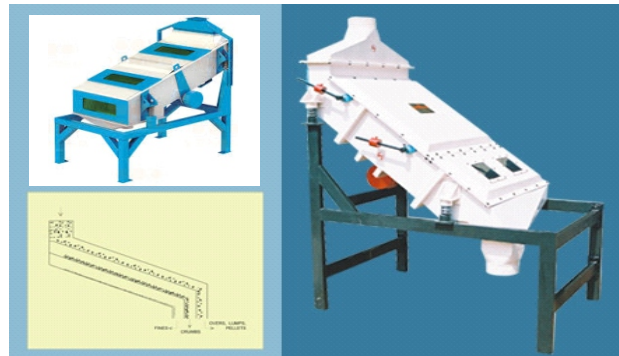
- Optimal utilisation of feed stuff by starter chicks, shrimp
- Prevention of feather picking
- Saves energy on the pellet mill
- Durable with long life of parts
- Easy to operate and maintain
- Specific adjustment of sizes of crumbs
- Increases efficiency
- Compact structure, stable performance

VIBRATORY SCREENER

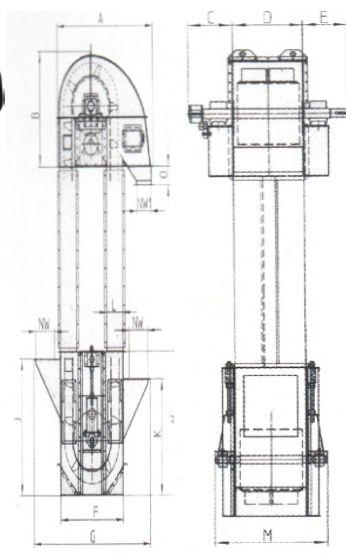
The pellets & crumbs are usually screened to separate fines & over size particles before final packing. For removing fines only, we require single deck screener. For removing both the over size & fines, we need double deck screener. Our screeners are fitted with separate frames over which wire mesh is clamped and are designed for quick change of different mesh screens.

Vibratory Motor with special Bearings for prolonged life.

Fitted with Flow Eveners or Product Spreader to give better screening effect.



BUCKET ELEVATOR



FEATURES:

- Dust-protected
- Hygienic
- Easy to adjust

PERFORMANCE RANGE :

- From 5 t/hr to 500 t/hr

BELT :

- Rubber belt with polyester inlay
- Optionally with PVC belt for increased tear
- Resistance
- Optionally with food stuff resistant belts

ELEVATOR HEAD :

- Split hood for simple installation and servicing
- Replaceable wear plate
- Inspection- and cleaning port at the
- Discharge point
- Dust - Protected bearings
- Drive with gear motor and chains coupling
- Integral reversing lock for safe and reliable
- Operation
- Optionally plastic

ELEVATOR FOOT :

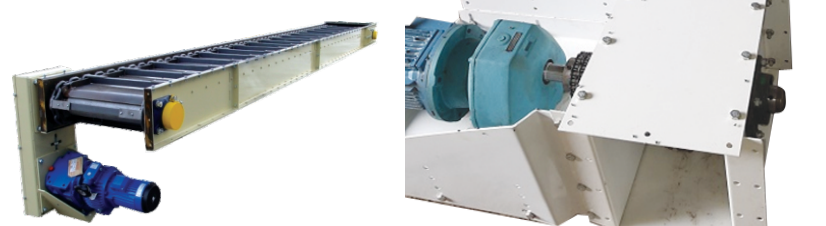
- Spindle-operated belt tension adjustment
- Generously mentioned clearing ports
- Integrated residue discharge slide
- Stave disc for genital product pick up
- Dust - protected earnings
- Optionally with rpm-and run-out monitoring

We are reputed manufacturers and supplier of premium quality **Bucket Elevator** Manufactured in stringent compliance with industrial quality standards, these elevators are equipped with a head, foot and belt. These are easy to install and service. The elevator head has dust-protected bearings for extra cleanliness. The elevator foot has adjustable belt settings. Its disc helps in gentle product pick-up. The belt is made using rubber or PVC for enhanced tear-resistance and durability. The belts are often resistant to foodstuffs as well.

CHAIN CONVEYOR

The Chain Conveyor manufactured at our production unit is available to clients in various specifications. These conveyors are ergonomically designed for the purpose of effective space utilization and saving space as well. These facilitate easy and simple integration into an overall system. These conveyors require dust-free and odor-free handling because of the possibility of complete sealing of the trough. These conveyors are rust-resistant and facilitate easy installation and maintenance.

S. NO.	Chain Conveyor or Model	Width of Chain Conveyor or Casing	Chain Flight Size in mm	Chain Speed in Mtr/sec	Chain Conveyor or Capacity in TPH
1	Cc-150	150	45	0.6	15
2	Cc-200	200	45	0.8	30
3	Cc-250	250	45	0.9	45
4	Cc-300	300	65	0.85	75
5	Cc-400	400	65	1.2	150



GRINDING EQUIPMENT

HAMMER MILLS

The Hammer mill is used for grinding different feed ingredients like, grains, cakes etc. used in feed milling industry. It is of top feeding and bottom discharge type.

We are capable of servicing in INDIA and abroad for clients who possess Hammer Mill of La Mechanical and Buhler Make apart from all Indian make hammer mills

FEATURE AND APPLICATIONS :

1500/3000 rpm grinders in various screen areas with low / medium hammer to screen clearances for efficient grinding.

Rotary feeder with magnetic separator and air control flap for equal distribution of grindables.

The grinding chamber is of water droplet shape for consistent evenly sized particle.

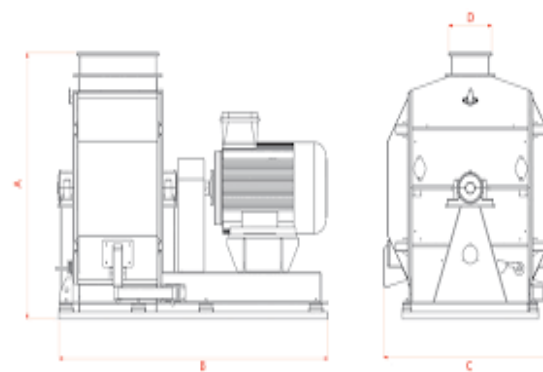
Window for fast removal of beater holding rods and quick acting clamps for fast changing of screens.

Rotor is dynamically balanced resulting in low noise and trouble free running.

Low temperature rise to preserve ingredients nutrients.

Counter – Hammers to avoid bottom material built-up.

- High Capacity
- Stable Performance
- Easy to handle/Maintain
- Heavy Duty Structure
- Heavy Bearing Housing



TECHNICAL SPECIFICATIONS								
Model	Capacity Kgs/Hr. Maize Grinding			Capacity Kgs/Hr. Mixed feed Grinding			Capacity Kgs/Hr. Millet grinding	Power (H.P.)
	Starter 4mm	Grower 5mm	Finisher 6mm	Starter 4mm	Grower 5mm	Finisher 6mm		
FSHM 1015	1800	3200	4000	2500	4000	5500	1800	15-Oct
FSHM 1525	2500	3800	4800	3200	4500	6800	2600	15-25
FSHM 2040	4500	6500	9000	6500	8500	11000	4500	20-40
FSHM 3075	6000	8500	13000	8000	10000	13000	8000	30-75
FSHM 50120	8500	10500	12000	12000	14000	16000	10000	50-120

MIXING EQUIPMENT



Horizontal Mixer

The Mixer is required to prepare a homogenous mixture of different powdered feed ingredients.

- Ribbon Mixer
- Paddle Mixer

We offer a product mixer, known as Ribbon Mixer.

Features and Applications :

Double ribbon mixer are used for gentle dry mixing with low liquid addition for Cv≤5.

The mixing chamber design with optimal rotor helps in mixing light as well as heavy particles evenly.

Sturdy rotor bearing housing with rotor-mixer body gap adjustment feature helps for no death corner in the mixer body.

Return air chute furnished for internal and external pressure balancing.

Pneumatically operated bomb door gate for complete discharge.

Large doors enabling easy clean out and inspection.

Multiple spraying nozzles section (optional).

Model	Batch Capacity		Power in H.P.	Dimensions				
	Ltr	Cu.ft		A	B	C	D	E
DSPM-500	500	17.7	10	1750	1370	1640	1150	1180
DSPM-750	750	26.5	15	1950	850	1860	1300	1500
DSPM-1000	1000	35.3	20	2200	900	2060	1450	1560
DSPM-1600	1600	56	30	2550	1030	2400	1650	1750
DSPM-2000	2000	70	40	2850	1150	2600	1890	2100

Note: The given batch capacity is for normal filling upto shaft level. This machine can work on 40% over filling and 60% under filling of normal filling level.

