



Rotary Dryer



Principle of Rotary Dryer :

Rotary dryers are used for drying wet powders and cakes, which are easily breakable and dispersible. The rotary dryer consists of a rotating drum with angle lifting v blades which lift the feed as the drum rotates and showers it in the stream of hot air flowing through the drum.

Technical Specification :

Capacity	:	500 Kg / Hr. to 50 Tons / Hr.
Contacts Part	:	MS / SS 304
Power Supply	:	380 / 415 voltz, 3 Phase, 50 Hz.
Rotation Speed	:	0 – 8 rpm
Insulation Layer	:	Made of rock wool
Heat Insulation Thickness	:	30 – 40 mm
Moisture Reduction	:	Upto 50%
Control Panel	:	MCC Panel with interlocks and instruments like VFD, TT, TIC, PID loop etc.
Forced Draft Fan & Air Filter Section	:	V belt driven Centrifugal Fan with electric motor
Induced draft fan	:	V belt driven Centrifugal Fan with electric motor
Hot Air generator	:	Finned Tube heat exchanger system (steam heated) with condensate recovery system.
Max Steam pressure required	:	Upto 4 Kg /cm2 pressure
Electric Power	:	As per client Installation place.

Direct & Indirect Type Rotary Dryer:

Direct rotary dryer comprises of rotating inclined shell through which a hot stream of air flows, the wet material present in the rotary shell is lifted by means of spiral flight and showered in hot flowing air. Due to this direct contact, the product is dried. Indirect type rotary dryers comprises of steam tube bundle inside the shell which from which heating media is passed and outside tubes the feed material is passed and drying takes place.

Advantages :

- Ideally suited for large capacity application and uneven particle size distribution.
- Continuous operation and versatile application.
- Low operating and maintenance cost.

Application (Direct Type Rotary Dryer) :

- | | | |
|------------------------|--------------------|-------------------|
| • Chemical fertilizers | • Waste sludge | • Nickel ore |
| • Clay | • Food products | • Chemical sludge |
| • Sands | • Plastics | • Filter cake |
| • Limestone | • Silica sands | • Ilmenite |
| • Ammonium sulfate | • Sugar | • Cryolite |
| • Ammonium chloride | • Sodium glutamate | • Ferrous sulfate |



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Application (Indirect Type Rotary Dryer) :

- Silica sands
- Ammonium sulfate
- Plaster
- Sodium glutamate
- Clay
- Sugar
- Ammonium chloride
- Foundry sands
- Ilmenite
- Limestone
- Chrome ore
- Fused phosphate fertilizer

Rotary Cascade Dryers

In Rotary Cascade Dryers the material is lifted and dropped continuously through the drying air stream with the help of internal lifters or flights. This allows for a closer and direct contact between the hot air and the product and thus results in faster and more uniform drying. The Hot Air at the desired temperature and flow is made to pass through the material gradually drying the product. The humid air is duly exhausted after collecting the fines through the help of a cyclone or a bag filter.



Salient Features :

- Close contact with air results in uniform drying
- Gentle drying
- Efficient Power Consumption
- High thermal efficiency

Applications :

- Ammonium Sulphate.
- Coal
- Municipal Solid Waste (MSW).
- Oxalic Acid.
- Sodium Sulphate.
- Boric Acid.
- Phosphogypsum.
- Sand
- Zinc Concentrates.
- Spent Malt.
- Ferronickel
- Fertilisers
- Lardstone
- Refractories' Rock Phosphate
- Spath fluor' Sugar

Rotary Louvre Dryer

In Rotary Louvre dryers, the material is not lifted and dropped through the drying air stream, resulting in less product breakdowns. The Hot Air at the desired temperature and flow is made to pass through the material gradually drying the product. The humid air is duly exhausted after collecting the fines through the help of a cyclone or a bag filter.

Rotary Louvre dryers are widely used for granular and free flowing products.



Salient Features :

- Can handle both, surface and bound moisture in the drying solids.
- Excellent mixing action ensures uniform drying of all the particles
- Efficient power consumption.
- Very gentle handling of drying solids avoiding attrition.
- Minimum dusting.
- Minimum breakage of materials.
- High thermal efficiency

Applications :

- Inorganic Salts.
- Potassium Carbonate.
- Common Salt.
- Cobalt Sulphate Crystals.
- Carbon Black.
- Resist Salt Beads.
- Sugar.
- Magnesium Sulphate (Crystals).
- Calcium Citrate.
- Granulated Complex Fertilizer.
- Boric Acid.
- Polymeric Beads.
- Agricultural Products.
- Calcium Chloride Flakes.
- Bone Meal

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