

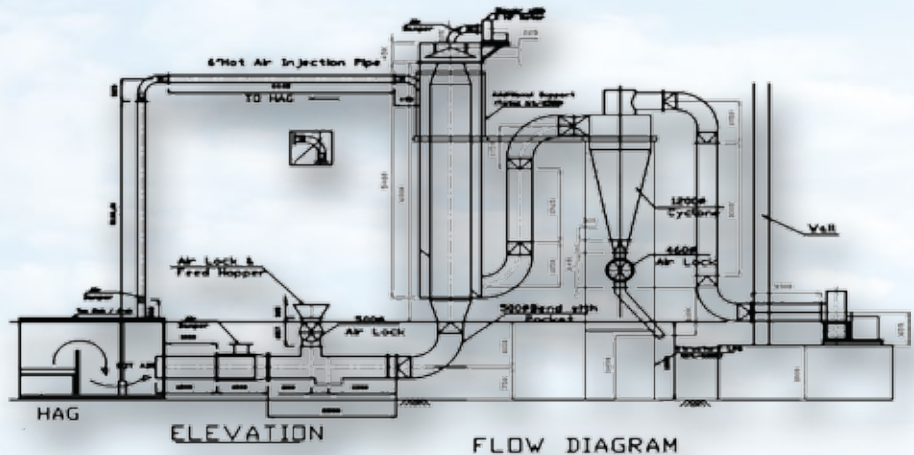
# Turbo Dryer (TD Series)

For suspension drying of powdery material having a maximum moisture content of 35% [wet basis] such as:

- saw dust
- DDGS
- spent wash
- slurry
- anaerobic digester residue
- green wood

## Operation

The system consists of a screw conveyor, air lock, conveying line including [insulated] drying column through which wet or moist material is transported in the presence of hot air to the cyclone. A powerful low-pressure centrifugal fan assures sufficient residence time for complete removal of excess moisture. Material is discharged through cyclone by means of a discharge piece.



## Standard Scope Of Supply

- Pressure locked screw feeder in steel for regulated feeding of material into air stream within feed hopper.
- Material trap for removal of metal pieces/stones.
- Single suspension drying column for TD.
- Large capacity low-pressure centrifugal fan with dynamically & statically balanced impeller.
- Material collecting cyclone.
- Rotary Air lock valve for complete sealing of system.
- Motors for screw, air lock and centrifugal fan.
- Control panel.
- Dryer column for drying of initial moisture at rapid speed.

## Not Included in the Scope of Supply

- Hot air system up to 350C needs to be connected to system
- Discharge from cyclone has to pass through bag filters or dust settling chamber.
- Insulation of Dryer

## Technical Specifications

MODEL	TD 90
Moisture Evaporation Capacity* [kgs/hr]	2000
Input Moisture [ Max.%]	35
Outlet moisture [ Min.% ]	15
Centrifugal fan motor [HP]	40
Rotary air lock motor [HP]	02
Screw conveyor motor [ HP]	3/5
Total connect HP/KW	47/35
Power consumption [units per ton]	8 - 10



**HITECH AGRO**  
BIOMASS INNOVATIONS

Performix Business Services

9100 West Bloomington Freeway Suite 159

Bloomington, Minnesota 55437

[hitech@performixbiz.com](mailto:hitech@performixbiz.com)

[www.hitechagro.org](http://www.hitechagro.org)

[www.hitechagro.org](http://www.hitechagro.org)

# Concentric Column Dryer (CTD Series)

## General Description Technical Specifications

The CTD Series is used for suspension drying of stalk type materials such as:

- mustard stalk
- cotton stalk
- sugar cane trash

or wet material having maximum moisture contents of 50 % (wet basis) such as:

- press mud
- DDGS
- spent wash
- anaerobic digester residue
- green wood
- wet slurry from the processing and extraction industry.

Conventional Flash dryers do not perform well while drying stalks and straws and materials with a moisture content more than 35%. The reason is a 2-3 second time delay occurring in conventional dryer is not sufficient for effective and complete drying as the release of moisture takes a considerable amount of time.

Straws and stalks need to be crushed for effective drying. This can be done in a cage mill. In a cage mill a rotating bar breaks the straw into small pieces which helps in drying. Straw/Stalk material does not pass through air lock effectively. Either the air lock gets jammed or the clearance has to be big enough to allow dust into the atmosphere.

## Operation

The system consists of a Screw Conveyor, Air Lock, Conveying line including insulated drying column and conveying through which wet or moist material is transported in the presence of hot air to the cyclone. A powerful low pressure centrifugal fan assures sufficient resistance time for complete removal of excess moisture. Material is discharged through cyclone by means of a discharge piece.

Moisture evaporation capacity (kg/hr)	- 1200
Input moisture (max. %)	- 40
Outlet moisture (min. %)	- 15
Centrifugal Fan Motor (HP)	- 30
Rotary Air Lock Motor (HP)	- 2
Screw Conveyor Motor (HP)	- 3

### Standard Scope Of Supply:

- Pressure locked screw feeder in heavy gauge steel for regulated feeding of material into air stream within feed hopper and material trap for removal of metal pieces/stones.
- Steel pipes are rammed with refractory mass for CNG firing.
- Large capacity low pressure centrifugal fan with dynamically & statically balance impeller.
- Material Collecting Cyclone.
- Air Lock is provided for powdery material only.
- Concentric Column for drying of initial moisture at rapid speed.
- Return Annular Space for slow speed of material for final drying.
- Connecting cables, motors and control instruments. (to be procured).
- Temperature sensor meters. (to be procured).
- Burner is not included.



S. No	Model	Dryer (tons/hr)	Moisture Inlet (max %)	Moisture Outlet (min %)	Centrifugal Fan Motor (HP)	Rotary Air Lock Motor (HP)	Screw Conveyor Motor (HP)
1.	CTD 45L	.66.	40	15	15	1.0	1.5
2.	CTD 45H	.99	50	20	20	1.0	1.5
3.	CTD 60L	1.36	40	15	30	2.0	2.0
4.	CTD 60H	2.2	50	20	40	2.0	2.0
5.	CTD 80H	2.76	5v0	20	50	2.0	2.0

