

Agni Vibro Fluid Bed Dryer

AGNI, the Vibratory Fluid Bed Dryer the most efficient, reliable and cost effective Dryer for both CTC and Orthodox Tea. Fermented tea is fed through a feeding conveyor to the Drying Chamber where conditioned hot air is introduced underneath a perforated stainless steel grid plate which carries the wet tea by the principle of fluidization, combined air and vibration. In this process fermented tea is dried uniformly to achieve best quality tea.

Construction:

- Heavy Mild Steel fabricated frame structure
- Heavy duty mechanical excitation system through alloy steel eccentric crank shaft drive.
- Plenum Chamber is coupled with the main frame with leaf spring for even vibratory effect throughout the total drying bed.

Plenum Chamber:

- Aero dynamically designed to achieve desired air volume and pressure for effective fluidization of the tea.
- Heavy mild steel insulated construction to prevent heat loss.
- Stainless Steel AISI 304 perforated grid plate to carry the tea on top of the plenum chamber.

Air Mixing Chamber:

- Mild Steel insulated construction.

Hot Air Blower:

- Heavy mild steel insulated construction with control damper
- Dynamically balanced Impeller as per IS standard
- Double inlet construction for uniform air flow.

Dust Extraction and Cyclone System:

- Dust extraction System is designed to extract humid air from the drying chamber
- After drying the lighter dust particle with fibers are removed from the drying system with the help of cyclone.

Stainless Steel Construction:

- All possible parts which are in contact with the tea are of food graded corrosion resistance stainless steel.
- Dust extractor multicore and impellers all are of food grade corrosion resistance stainless Steel.
- The heating chamber is covered with stainless steel side spillage guards throughout the length.

Centralized Control Panel:

- Single unit with Isolator, digital voltage, amp meter and four temperature indicator.
- Design as per international standard with all switch gear components.

DESCRIPTION	MODEL					
	A100	A200	A300	A400	A600	
Capacity of made Tea Kg/Hr. *	75-150	160-260	240-370	350-550	540-770	
Water Evaporation Load (Kg/Hr.)	200	540	750	1150	1600	
Size of Drying Chamber (mm x mm)	580x5000	1070x6200	1070X8600	1650X8600	1650X11250	
Grid Area (sq mt)	2.9	6.63	9.2	14.2	18.56	
Max. Heat Load (KCal/ Hr.)	180,000	410,000	650,000	975,000	1,290,000	
Installed Power (Drying System) HP	9.5	23	28	45	67.5	
Installed Power (Dust Collection) HP	7	13	15.5	25	35	
Type of Fuel	Oil, Coal, Wood, Gas or Steam					
Fuel Consumption ** (per Kg of made tea)	Oil 0.16 Lt; Coal- 0.5 Kg; Wood- 350-600 mt/mt3; Gas 0.15 Kg; Steam- 2.0-3.0 Kg					
Space Occupied in mm.	Length	7700	10750	13100	14900	18270
	Width	2700	3500	3500	3850	3850
	Height	2950	4050	4100	4150	4200
Dryer weight in Kg. (without heater or radiator)	4000	6100	7700	11300	15900	

*** Capacity mentioned is calculated considering moisture content of withered leaf, ambient & inlet temperature.**

**** Fuel consumption assumes ideal fuel and operating conditions.**

(Due to continuous process of product development, the design is subject to change without prior notice.)