

The background of the entire page is a soft-focus image of tea leaves, showing their intricate vein patterns and natural green color. This is overlaid with large, flowing teal and dark teal shapes that create a sense of movement and depth. The overall aesthetic is clean, modern, and nature-inspired.

**arista**<sup>®</sup>

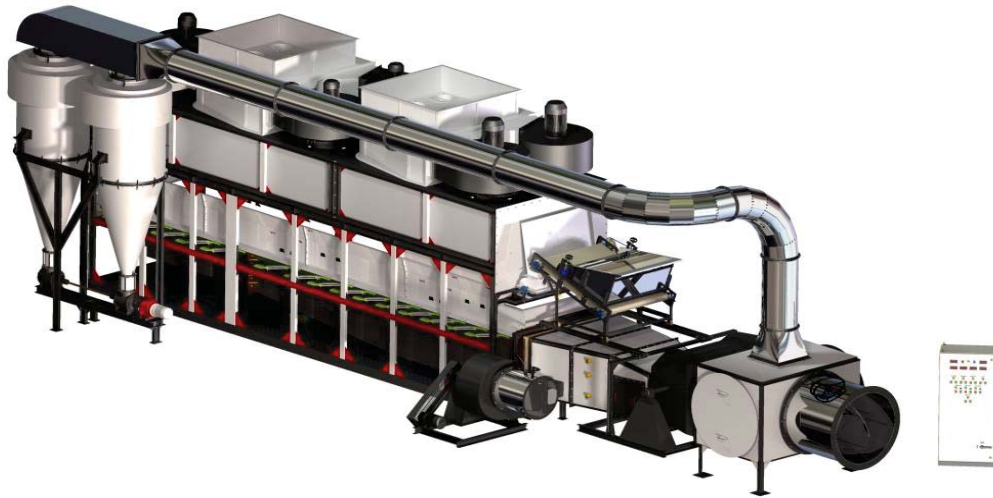
Vibratory Fluid Bed Dryer



***T & I Pvt. Ltd.***

Tea processing  
**machinery**  
from plucking to packing

**T&I** introduces their first Fluid Bed Vibratory Dryer **arista**<sup>®</sup> the most efficient and cost effective Dryer for both CTC & Orthodox heavier & BLACKER Teas.



## CONSTRUCTION

### Drying Process

Fermented teas are fed uniformly to the Feed Distributor through the feed conveyor. The feed distributor also breaks the fermented lumps and spreads the teas over the Stainless Steel grid plate. Fluidisation takes place in the chamber by the combined forces of mechanical movement of the aerodynamically designed plenum chamber and the high velocity of hot air forced through the perforation of the grid plate. The forward movement of teas is mainly a result of these two forces. The initial drying takes place in the first two stages where the teas are subjected to high temperature thereby arresting the fermentation and then discharged at a much lower temperature and by passing through a much longer time for removal of balance moisture at a lower rate of removal

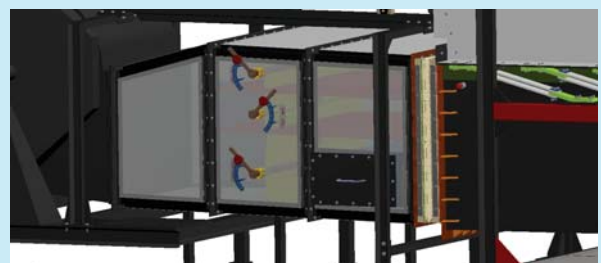
### Benefits

- Higher outputs with low fuel consumption
- Uniform air-flow & gradual removal of moisture
- Excellent Liquors
- Highest Thermal Efficiency
- Brisk, Thick Teas
- Minimum Maintenance
- Self-Cleaning
- Suitable for any type of Heater and Fuel
- Unique Adaptability to Varied Conditions of Drying
- No re-firing of dust
- Low Space Requirements
- Efficient Dust Collection System
- No over-firing of balls & broken
- Negligible fly-off
- Double Inlet Insulated Hot Air Blower for uniform air flow

### Salient features

#### Independent Air Flow Control

The chamber has 3 zones and the air flow in all these 3 zones have independent dampers for fine air volume adjustments. The cold air flow adjusted by damper is mixed in the 3rd zone in the mixing chamber to control the drying rate.

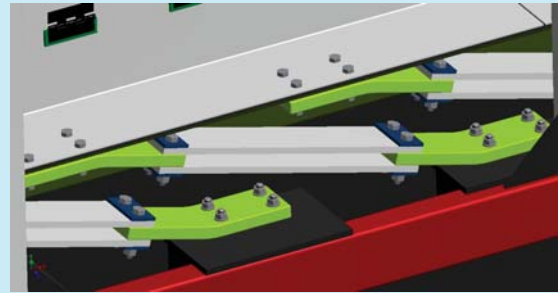


### Independent Suspension

The plenum chamber is suspended by maintenance free spring steel brackets.

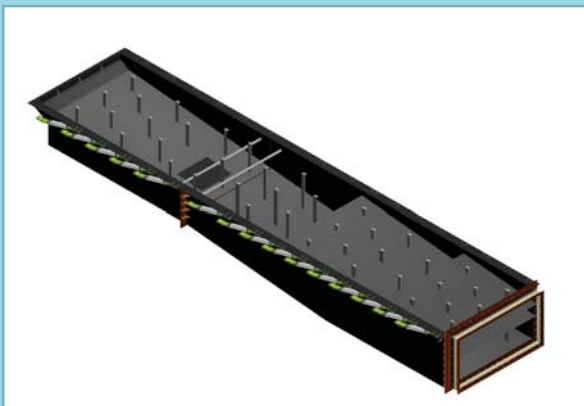
### Two Stage temperature Drying

Initial drying at high temperature ensures immediate arresting of fermentation process with quick moisture removal from the high temperature of air.



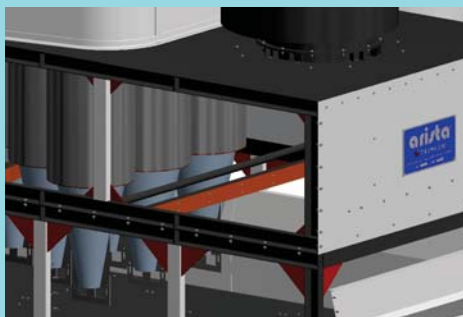
### Aerodynamically designed Plenum Chamber

For uniform pressure curve of air along the length.



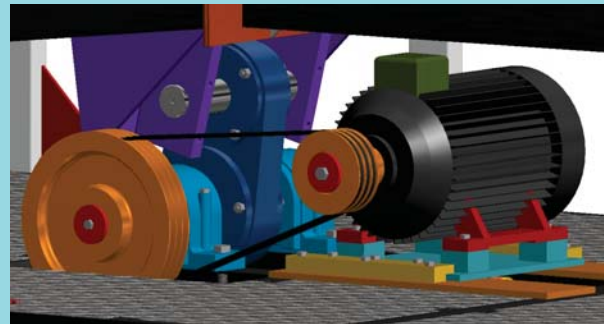
### Dust Extraction & re-firing system

The special design of centrifugal blowers in the exhaust system, sucks humid air with low mass fibres and tea dust particles passing through the multi-clones and separates the fly-off which drops on the grid plate, which gets mixed and dried with the fluidised teas.



### Angular Excitation

Eccentric driven vertical angular actuating mechanical arrangement imparts angular excitation to teas providing circular mixing forward motion at the desired throughput time.



### Air-Lock

An airlock is basically a tube with a six fingered star shaped part inside rotating slowly run by a small electric motor which permits the passage of air and its surroundings while minimizing the change of pressure in the vessel and loss of air from it. The airlock prevents air from being drawn up from the bottom of the cyclone while letting char that is knocked out of the gas stream by the cyclone to fall into the shot auger.



### Cyclone System

At the discharge end of the dryer the fibre extraction cyclone system is designed with twin cyclones so that the fibres and light particles are picked by the high exhaust air of the cyclone fan.

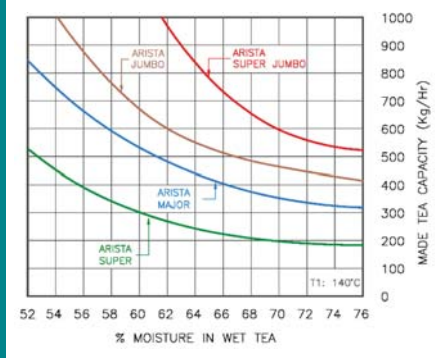


# DETAILED TECHNICAL SPECIFICATIONS

## Arista Specifications For CTC Tea

	Arista Super	Arista Major	Arista Jumbo	Arista Super Jumbo
Capacity Kg/hr (Made Tea) @55% moisture	190	270	390	575
Grid Area (M <sup>2</sup> )	6.36	8.82	13.53	19.69
Air Velocity over the grid sheet (Mtrs/sec)	1.5	1.5	1.5	1.5
Water Evaporation Load (Kg/hr) @1200 C	540	750	1150	1650
Size of Drying Chamber (mm x mm)	1135 x 5600	1135 x 7770	1651 x 8195	1720 x 11440
Max. Heat Load Requirement (Kcal/hr)	464832	645600	989920	1420320
Installed Power Drying Sytem (Kw/HP)	22/29.5	25.74/34.5	32.82/44.0	51.47/69.0
Installed Power Dust Collection	9.33/12.5	13.06/17.5	27.98/37.5	33.57/45.0
Fuel Consumption (per Kg. of Made Tea)	Oil: 0.16 Ltr; Steam: 2.0-3.0 Kg; Fire Wood: 350 to 550 MT/cu.mtr.; Coal: 0.4 to 0.6 Kg; Gas: 0.15 Kg.			
Space Occupied (L x W x H)	9000 x 3400 x 3600	12000 x 3500 x 3600	14500 x 4150 x 4400	19200 x 4300 x 4750
Weight of Equipment (Kgs)	6000	7500	11000	15500

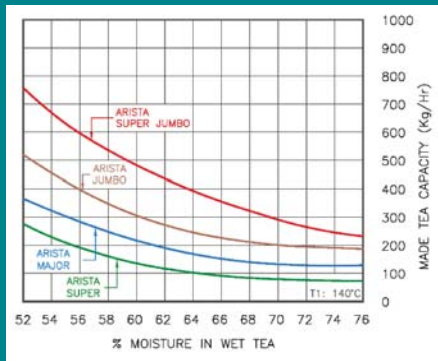
### Capacity Graph For CTC Tea



## Arista Specifications For Orthodox Tea

	Arista Super	Arista Major	Arista Jumbo	Arista Super Jumbo
Capacity Kg/hr (Made Tea) @55% moisture	160	210	320	485
Grid Area (M <sup>2</sup> )	6.36	8.82	13.53	19.69
Air Velocity over the grid sheet (Mtrs/sec)	1.5	1.5	1.5	1.5
Water Evaporation Load (Kg/hr) @1200 C	290	400	615	885
Size of Drying Chamber (mm x mm)	1135 x 5600	1135 x 7770	1651 x 8195	1720 x 11440
Max. Heat Load Requirement (Kcal/hr)	313664	432640	767520	1030848
Installed Power Drying Sytem (Kw/HP)	22/29.5	29.47/39.5	40.28/54.0	51.47/69.0
Installed Power Dust Collection	9.33/12.5	13.06/17.5	27.98/37.5	33.57/45.0
Fuel Consumption (per Kg. of Made Tea)	Oil: 0.16 Ltr; Steam: 2.0-3.0 Kg; Fire Wood: 350 to 550 MT/cu.mtr.; Coal: 0.4 to 0.6 Kg; Gas: 0.15 Kg.			
Space Occupied (L x W x H)	9000 x 3400 x 3600	12000 x 3500 x 3600	14500 x 4150 x 4400	19200 x 4300 x 4750
Weight of Equipment (Kgs)	6000	7500	11000	15500

### Capacity Graph For Orthodox Tea



In view of our continuous process of product development, the design of the machine is subject to change without prior notice.



**T & I Pvt. Ltd.**

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