

Counter-current Pulverizer

YTK Series

With the Original Quality of Materials and/or ingredients keeping Intact, With Various Grain Sizes easily Controlled, and With Pulverizing at Low Temperature, A Revolutionary Pulverizing Machine Is Put in Appearance on the Market.



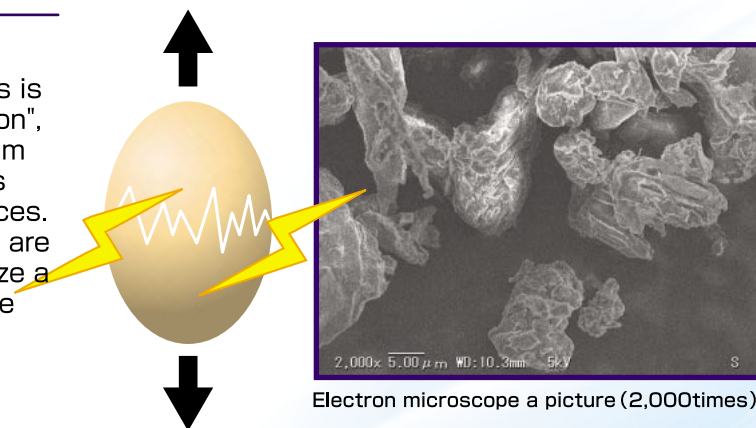
The Features of YTK Series

- YTK's counter-current pulverizing system works at low speed and finishes off into impalpable powder.
- This is a revolutionary pulverizing system without raising the temperature of material.
- With easy operation, grain size can be adjusted from a few microns to several hundred microns.
- The output of the YTK pulverizer goes up by 30-40 percent compared with that of conventional pulverizers.
- By simplified structure, the handling and cleaning of the machine becomes easier.
- Because of low speed rotation, the operation noise of the machine grows much softer.

The Characteristics of YTK

The Principle of Pulverization

YTK's counter-current pulverizing system is a system of pulverization by shearing force. This is a system, what we call "volumetric pulverization", that the combination of vortex flow and vacuum both generated by two counter-rotating rotors cuts a material or ingredient into just two pieces. Unlike conventional pulverizers many of which are "area pulverization", YTK's system can pulverize a material or ingredient through its center. Time for grinding becomes shorter in this system, abating the generation of heat.



The Nature of Powder (Pulverized by YTK's System)

- Grinding materials or ingredients with their components keeping less damageable. (especially, being ideal for leaving heat-sensitive components as it stands)
- Product powder brings out the flavor, color, and taste of materials and/or ingredients.
- Grain size can be adjustable according to the optimal size of goods.
- The shape of grain is a many-sided figure, improving penetration of water and water penetration speed.
- Grain size can be selected according to handling qualities and workability, without grinding excessively.

Materials and/or Ingredients Appropriate for YTK Pulverizer

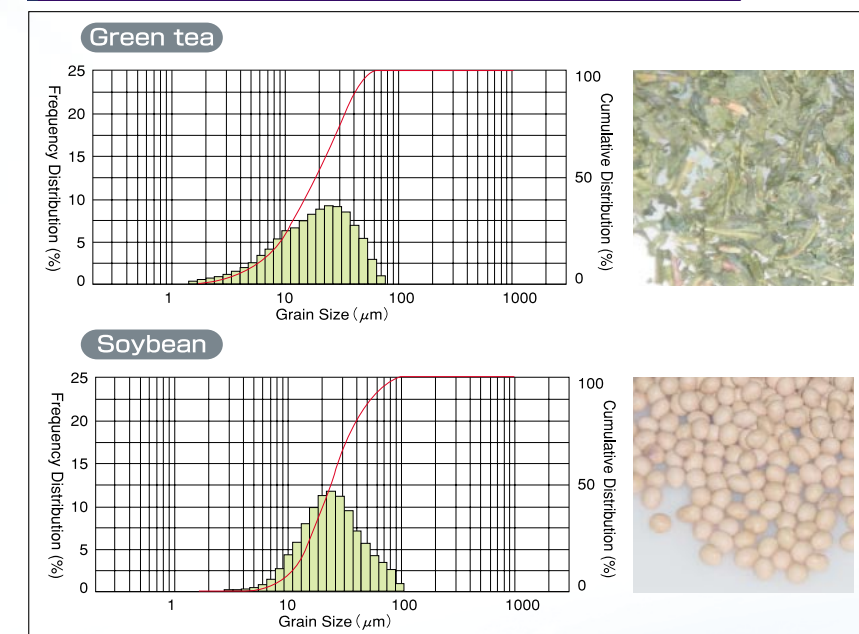
- Heat sensitive materials or ingredients, such as those containing Vitamin B, Vitamin C, etc.
- Materials and/or ingredients to be attentive to the deterioration and loss of their original flavor, color and taste.
- Materials and/or ingredients containing high fat and oil content and high glucide.
- Frozen materials and/or ingredients to be needed to grind at room temperature.
- Materials and/or ingredients to be needed to preset their grain size.
- ●●●● And desired powder that has high quality and good usability, but is not produced by conventional machine, can be realized.

Components of Materials (Absolute %)

Item	Protein		Fats & Oils		Ash		Carbohydrate				Tannin		Anhydrous Caffeine	
	Material	Powder	Material	Powder	Material	Powder	Glucide		Dietary Fiber		Material	Powder	Material	Powder
Green tea	19.75	19.32	6.20	7.02	5.25	5.17	52.63		53.41		14.08	13.02	2.10	2.07
							16.18	36.45	16.84	36.57				
							31.36	29.72						
Soybean	38.77	39.70	23.72	24.79	6.16	5.79	13.91	17.45	12.34	17.38				

(Analyzed by Japan Food Research Laboratories)

Grain Size Distribution



Examples for Pulverization

Materials appropriate for YTK Series

※ Materials, other than those shown right, appropriate for YTK's pulverizer can be expected to be found in various fields

Health Food

● New Leaves of Barley · Agaricus · Turmeric · etc.

Cereals

● Soybean · Rice · etc.

Vegetables

● Pumpkin · Chinese Yam · Garlic · Carot · Burdock Root · etc.

Herbal Medicine

● Geranium Herb · Swertia Herb · Atractyodes Rhizome · etc.

Spice

● Nutmeg · Herbs · Pepper · Japanese Pepper · etc.

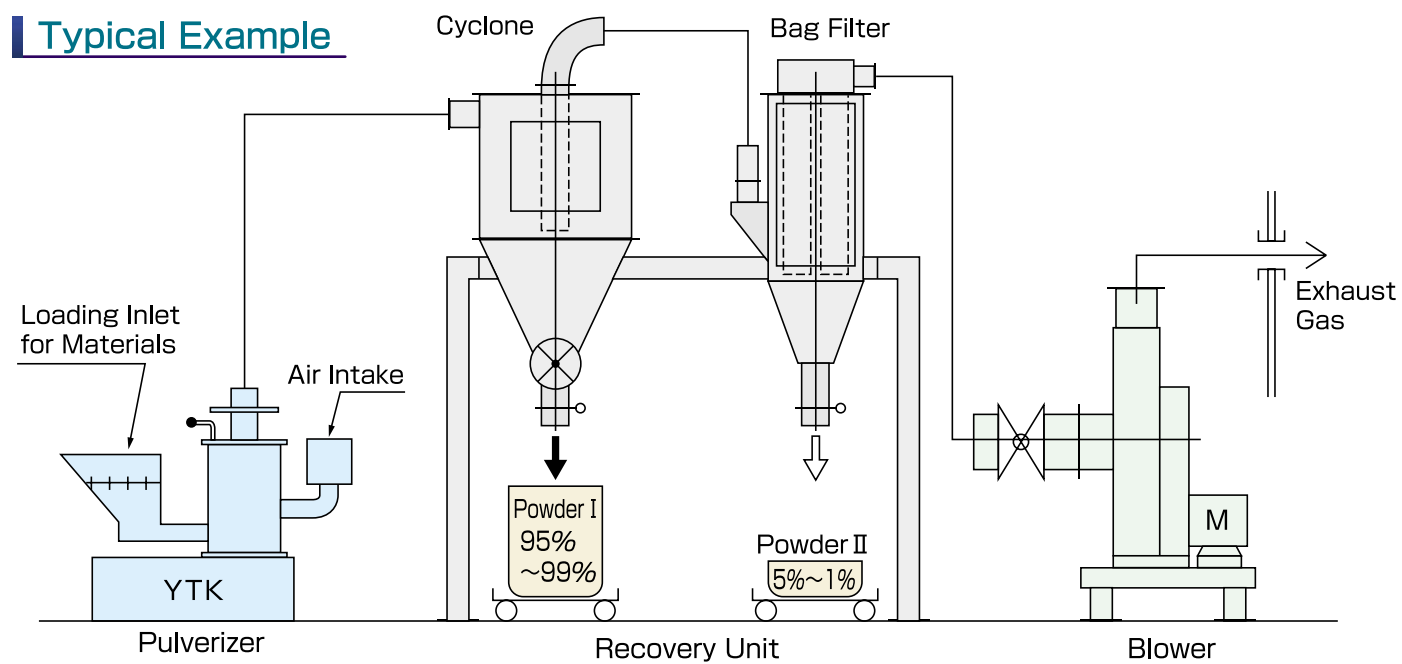
Food for Drinkables

● Green tea · Oolong · Ganoderma Lucidum · etc.

We would be pleased to help develop your new product.

Simplified Flow Diagram of TYK Series

Typical Example



●Dimensions for Installation:8000L×3500W×3500H (mm)
:315L×137.8W×137.8H (in.)

Standard Specifications for YTK Series

Item	Pulverizer					
	YTK3275Series			YTK5222Series		
Series Model	YTK3311			YTK5337		
Model	YTK3311			YTK5337		
Type of Pulverization	Volumetric Pulverization			Volumetric Pulverization		
Number of Rotors for Pulverization	2 Rotors			2 Rotors		
First Rotor (kW)	5.5	Fixed Rotation Rotor	Inverter (option)	18.5	Fixed Rotation Rotor	Inverter (option)
Second Rotor (kW)	11	(Motor power should be selected according to typical material for design)		37	(Motor power should be selected according to typical material for design)	
Feeder (kW)	0.1 (Variable by Inverter)			0.2 (Variable by Inverter)		
Pulverizing Rate (kg/hr)	50~150 (Depending on Materials and Grain Sizes)			150~500 (Depending on Materials and Grain Sizes)		
(oz/hr)	1764~5292			5292~17637		
	(e.g., Standard Pulverizing Rate of Tea Leaves:50)			(e.g., Standard Pulverizing Rate of Tea Leaves:150)		
Dimensions of Machine (mm)	1300W×1050D×1000H			2150W×1650D×1700H		
(in.)	51.2W×41.35D×39.4H			84.65W×64.97D×66.93H		
Power	AC200V 50/60Hz 18kw			AC200V 50/60Hz 56kw		
Operation	Manual Operation (at Fixed Rotation Speed)			Manual Operation (at Fixed Rotation Speed)		
Accessory	Control Panel			Control Panel		
Weight (kg)	850			2400		
(oz)	29983			84658		
Option	Contacting Part with Powder	Stainless Steel		Stainless Steel		
	Pulverizing Speed	Variable by Inverter		Variable by Inverter		
	Type of Recovery Unit	Three Types mainly Composed of Cyclone		Three Types mainly Composed of Cyclone		

● Automation of feeding process and other associated process would be discussed willingly.

※The individual specification would be proposed according to customer's desired materials and/or ingredients.

International Application for Patent	South Korea: No. 0815930	German, U.S.A, and China: Patent pending
	Taiwan: Patent I 270408	

●The products and their configurations and dimensions shown in this catalogue are subject to change without notice for improvement.



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Grinding Materials and/or Ingredients, with Their Components and Flavor Remaining Intact

Counter-current Pulverizer
YTK PATENT PEND.
Series

yutaka

