

## Easy Maintenance

### Easy Cleaning in Just a Minute



After Gathering water, the high-speed disc spins; create a vortex; that cleans the tub in just a minute. Adding hot water or detergent increases its effectiveness.

### Easy Drainage in a Few Seconds



ECXPs has a dumping mechanism and open top tub for users to easily drain dust and detergents then check for any remains in seconds. After draining, the tub is then lightly scrubbed and is ready for the next batch.

## Stainless Steel and Urethane Bowls for Different Uses



### Stainless Steel Drum and Disc

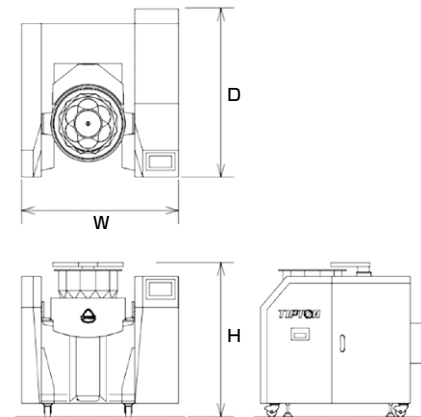
Its ease of cleaning and disinfection is hygienic as it stops discoloration and breeding of bacteria. The inner tub has a sanitary buffed surface to stop sticking making ECX-Ps perfect for the medical and food industries.



### Urethane Drum and Disc

Urethane rubber has high durability when processing with abrasive powders for grinding/polishing. Also, its low adhesivity prevents sticking and sedimentation; perfect for mass finishing and base chemical production.

#### ■Specifications



Model	Size	Weight	Capacity
ECX40Ps	W1250 × D1300 × H1200mm	約800kg	約15L
ECX200Ps	W1800 × D1600 × H1450mm	約1500kg	約80L

- The specifications of machines may be changed for improvement without prior notice.
- Custom Specifications are available upon request.

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23/06/A

A device for powder mixing, granulation and refinement



**ECXPs** [pi:z]



*Mixing, granulation and refining for powders, all in one device*

Patent

No.4740419  
No.5603808

Made in  
Japan

## Case Study

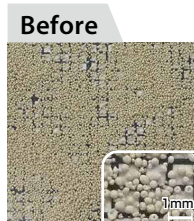


### Granulation

Making small grains to big grains.

#### Revolving Granulation

The particles in the base powder bond and expand in a process similar to a rolling snowball.



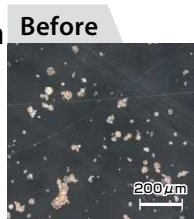
Revolving Granulation



- Sphericalizes
- Consistent particle diameter
- Density Consolidation

#### Agitation Granulation

Its Agitating (stirring) power agglomerates (clumps) the powder together.



Agitation Granulation



- Consistent Particle Diameter
- Adjusts densities



**ECX Ps**

- Higher Sphericity (Revolving Granulation)

#### Aspect Ratio

Previous Tech.



1.13

ECX Ps

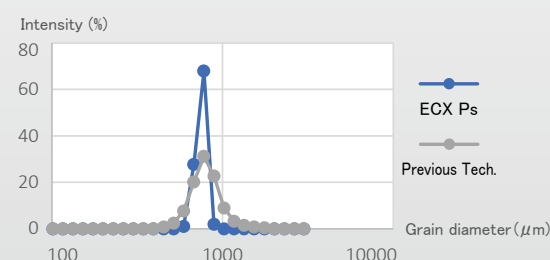


1.04

\*Aspect Ratio: compares the longest and shortest diameters. 1=perfect sphere.

- Sharp particle Distribution

#### Standard Deviation



Previous Tech. 157.4

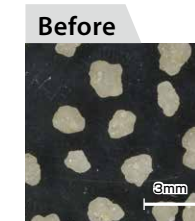
ECX Ps 90.7

### Spherical Particle Sizing

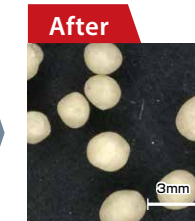
Sphericalizes Irregularly Shaped Particles to Consistent Sizes

#### Granulation

Its vortex flow continuously collides a countless number of particles in all directions to create a smooth shape.



Granulation



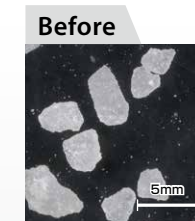
- Consistent Particle Diameter
- Surface Smoothing

### Coating

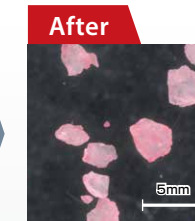
Coating particles.

#### Spray Coating

Coating agents are highly refined and stick better the stick evenly to the surface.



Spray Coating



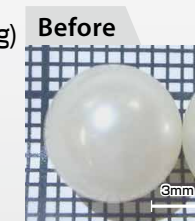
- Uniform coating

### Polishing

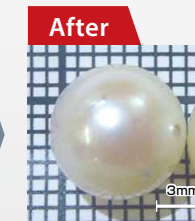
Perfect for precise polishing with agents/media under 1 mm in diameter

#### Dry Barrelling (Polishing)

It agitates work with micro media and polishing agents with <1 mm Diameter for precise surface finishing.



Dry Barrelling (Polishing)



- Polishes every nook and cranny by using highly fine powders
- Achieves a super mirror finish <0.005μm

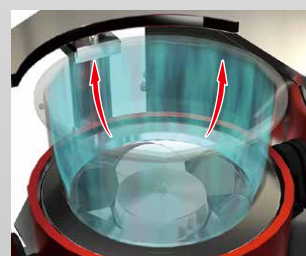
## Features



Patent5603808

- Can Process Grains Under 1mm in Size

#### Narrow Gap and Air Flow



There is only a miniscule gap between the rotating disc and drum. From this gap, there is a continual flow of air which stops base powders and fine media from falling.

- Base Powders don't Stick

A brilliant shape that reduces the loss of base powders.



Its original, brilliant shape features multiple, concave planes that increases its vortex flow strength and form. At the same time, the centrifugal force from its vortex flow shears particles inside the pan and reduces sticking to its sides. Its lack of convex planes stops unwanted sedimentation.

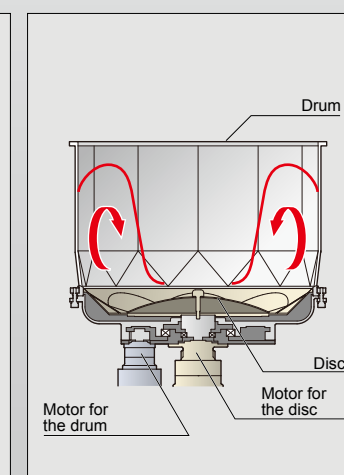
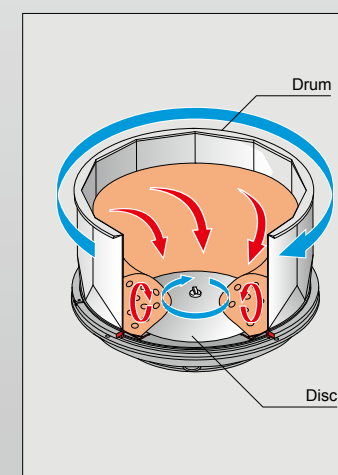
## Principle of Flow



Patent4740419

Its multispin tech supports super light and highly refined particles.

Its brilliant disc stops sticking



The centrifugal force of high RPM spinning disc forces particles into the sides then the inner wall of the drum forces the particles up.

The particles risen to the top, drop to the bottom then return to the center of the disc. This is repeated and creates vortex.

The vortex's flow does not weaken when revolving lightly particles at low speeds; the drum rotating in the opposite direction of the disc causes flow resistance, making the flowing strength of the vortex even stronger.