

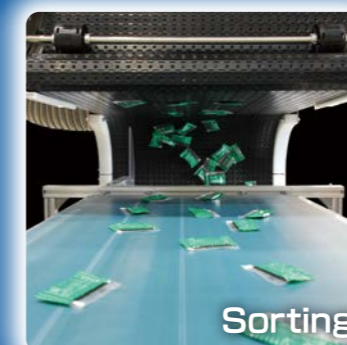


# Vacuum Conveyance EcoCuum®

**The best flexible  
vacuum conveyor  
system**



Transfer



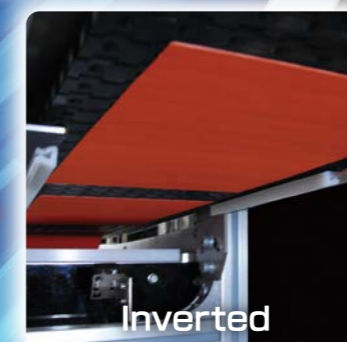
Sorting



Prevention of Misalignment



Vertical conveyance



Inverted

Please watch our  
Ecocuum video!



Daido Kogyo Co., Ltd Official Web site

[Our Business /Industrial Machinery Products ]Vacuum conveyor

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### Feeding



### Conveyance



### Applications

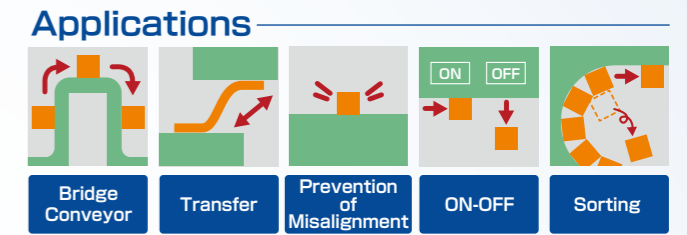
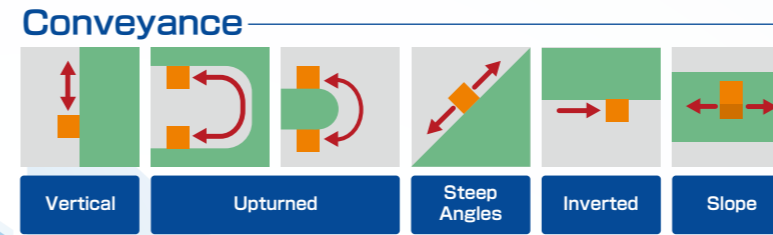
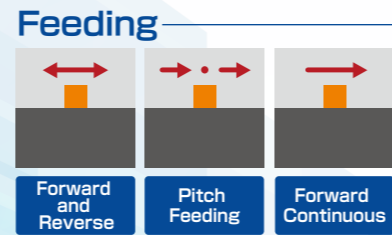


**DID® DAIDO KOGYO CO., LTD.**

# Vacuum conveyance increases efficiencies of automation, labor saving and production space.

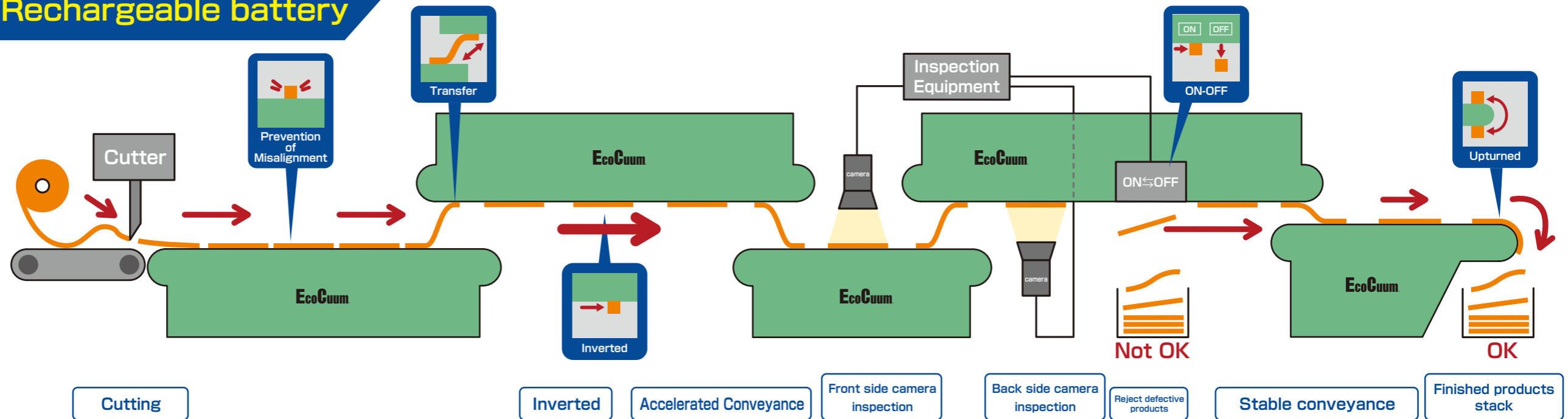
Air is vacuumed through the plastic belt, conveying product with suction against the belt through adsorption.

EcoCuum increase automation and labor saving possibilities for inspection or pick and place process that was impossible up until now.



## Industry **Film/Rechargeable battery**

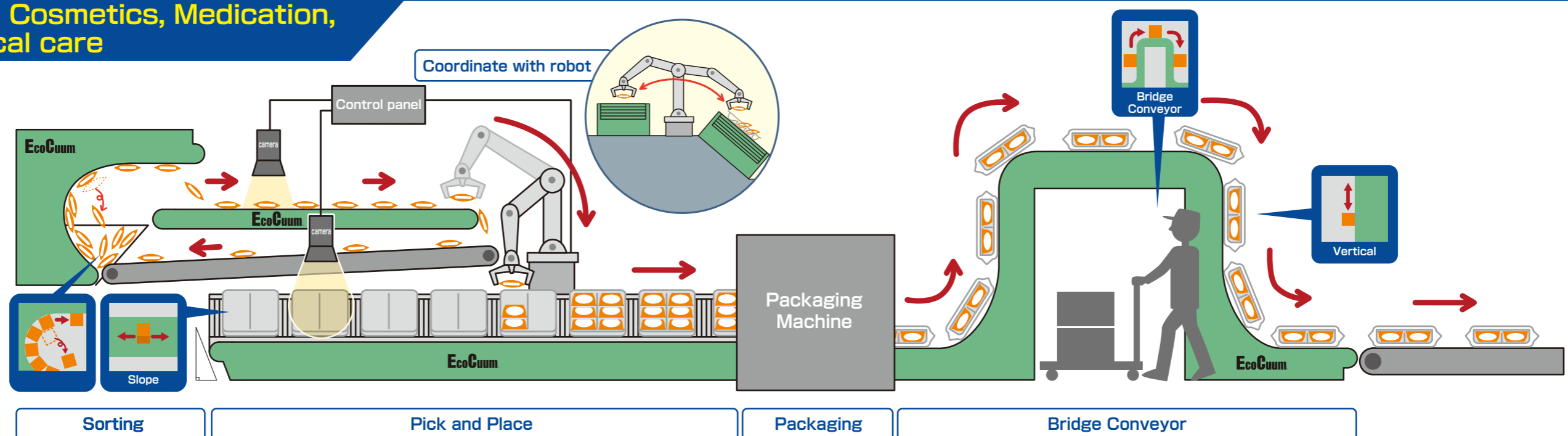
**Products**



EcoCuum can be used in various production lines.

## Industry **Food, Cosmetics, Medication, Medical care**

**Products**



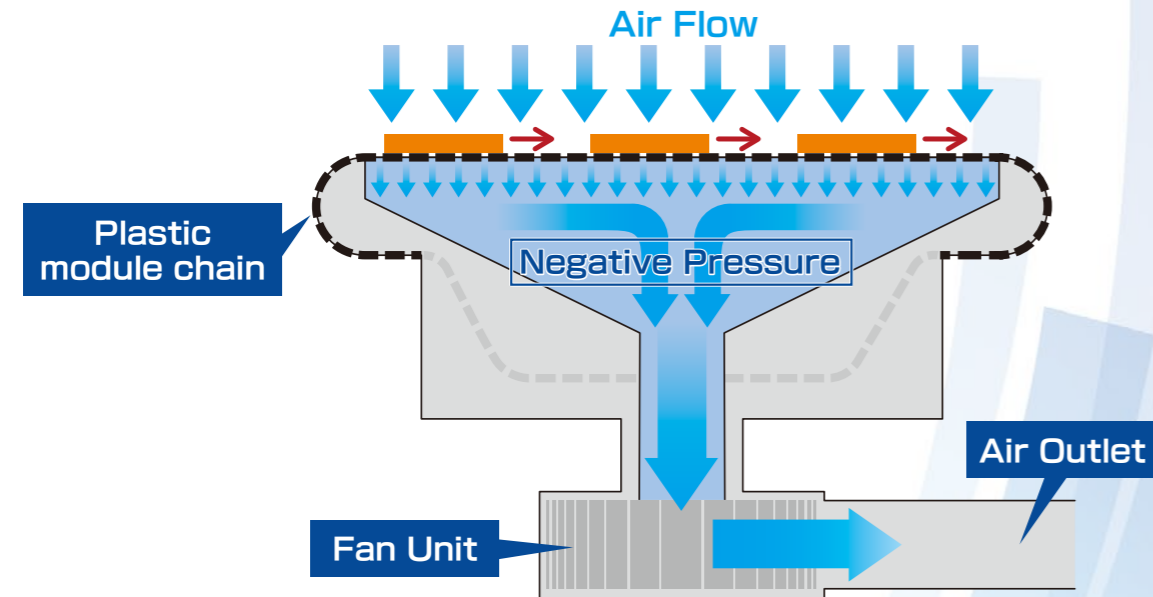
# Mechanism/Features

## What is "EcoCuum"?

The conveyance system uses vacuum function. The plastic module chain has tapered holes which create strong pressure by air coming through the fan unit. The strong intake enables prevention of misalignment of product and reduction of power consumption.

By doing this, EcoCuum can convey the products in a variety of directions such as vertical, inverted or steep angles that standard conveyor systems cannot offer.

Also EcoCuum can be coordinated with inspection equipment, robots and reject defective products with ON-OFF controls. EcoCuum creates the future of production lines.

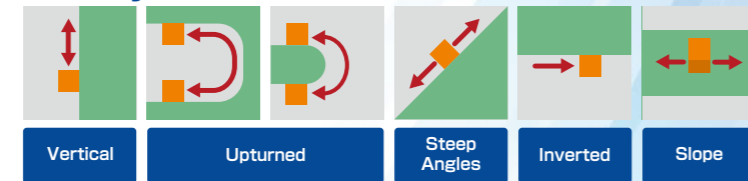


## Features of Feeding, Conveyance and Applications

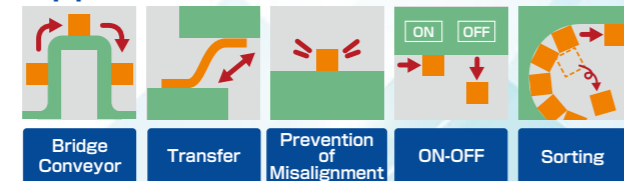
### Feeding



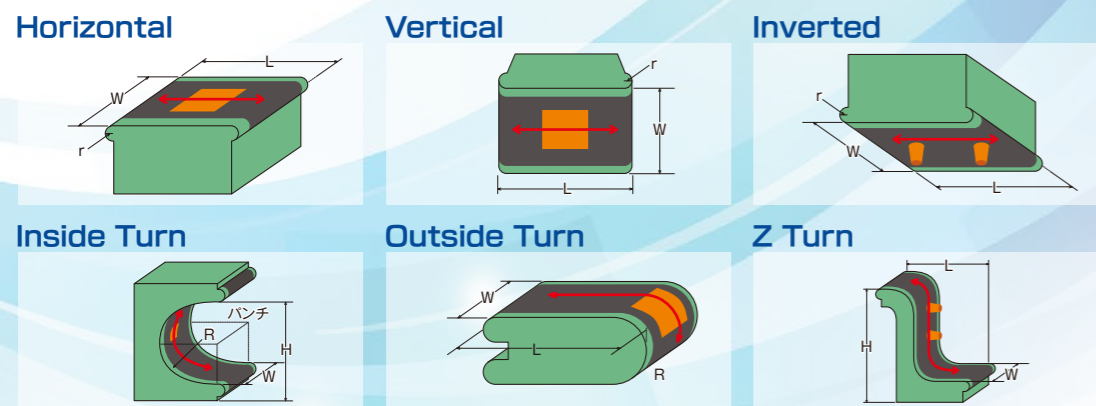
### Conveyance



### Applications



## Types



Standard Size	
L	350mm~
W	76.2mm~
r	36mm~76mm
R	200mm~
H	800mm~

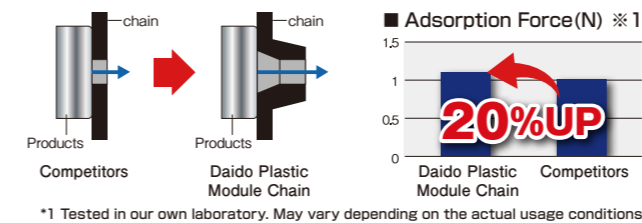
Standard Spec.	
Speed	MAX50m/min
Temperature Range	-20 to 80°C
Power source /Voltage	200V Three-phase power supply
Frame Material	Stainless Steel
Control Panel	Available
Noise	Ave.80dB

Customization is available per customer request. Please consult us for air outlet layout or built-in fan unit type.

## Plastic module chain with optimum features for vacuum conveyance.

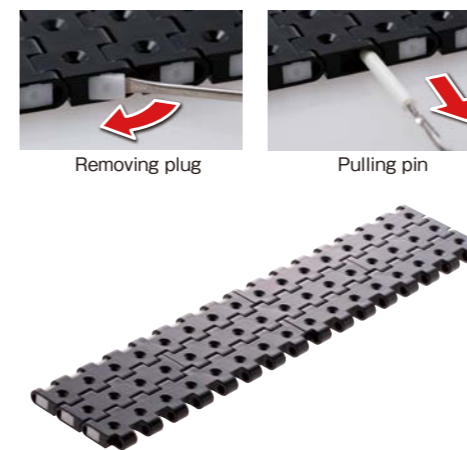
### Improved suction force compared to others.

Unique design of tapered hole enables improved suction force and noise reduction. Patent



### Easy Maintenance

Assembling and disassembling the plastic module chain can be done easily from a single angle.

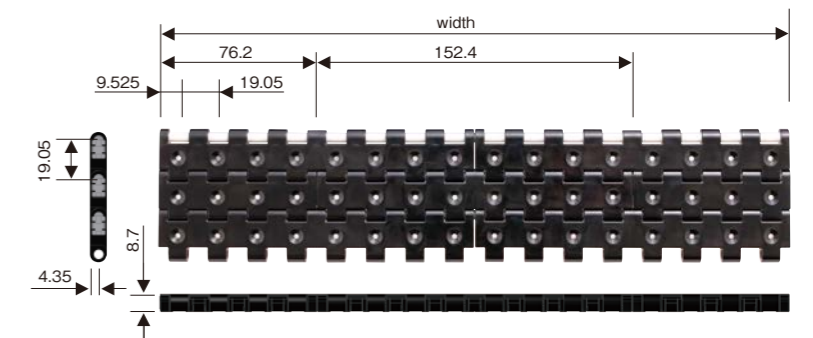
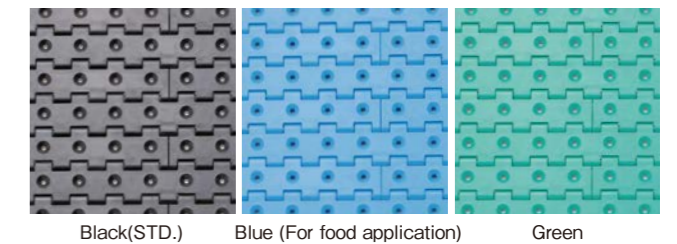


### Conforms to food sanitation laws

We use materials that conform to food sanitation laws.

### Multi-colors are available

Black comes standard however blue and green are also available according to application.



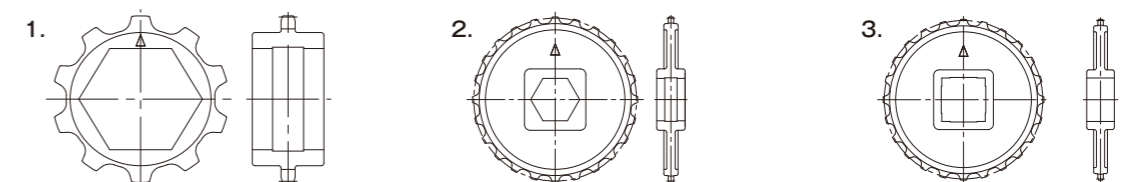
Application	Chain Pitch (mm)	Color	Width(mm)	Speed (m/min)	Open Porosity	Weight (kg/m <sup>2</sup> )	Temperature Range (°C)
Vacuum Conveyance	19.05	Black(STD.) •Blue-Green	76.2~1828.8 (Multiple of 76.2mm)	MAX 50	4%	7.22	-20 to 80°C

Model	DPM 60	W24	0	V4	00
Daido Plastic Module Chain		Chain pitch Width(INCH) (e.g.)24×25.4=609.6(mm)		Material Porosity4%	Color (Black(STD.) •Blue•Green)

### ◆ Type

Model	Chain Width (mm)	Model	Chain Width (mm)	Model	Chain Width (mm)
DPM60-W03-OV4	76.2	DPM60-W27-OV4	685.8	DPM60-W51-OV4	1295.4
DPM60-W06-OV4	152.4	DPM60-W30-OV4	762.0	DPM60-W54-OV4	1371.6
DPM60-W09-OV4	228.6	DPM60-W33-OV4	838.2	DPM60-W57-OV4	1447.8
DPM60-W12-OV4	304.8	DPM60-W36-OV4	914.4	DPM60-W60-OV4	1524.0
DPM60-W15-OV4	381.0	DPM60-W39-OV4	990.6	DPM60-W63-OV4	1600.2
DPM60-W18-OV4	457.2	DPM60-W42-OV4	1066.8	DPM60-W66-OV4	1676.4
DPM60-W21-OV4	533.4	DPM60-W45-OV4	1143.0	DPM60-W69-OV4	1752.6
DPM60-W24-OV4	609.6	DPM60-W48-OV4	1219.2	DPM60-W72-OV4	1828.8

## Specialized sprockets



No.	Model	Number of teeth	Pitch dia. (mm)	Outer dia. (mm)	Hub type		Shaft	Material
					Dia. (mm)	Thickness (mm)		
1	DP60S-10T-38H	10	61.65	62.5	φ50	25.4	Hexagonal 38 Cold finished steel bar	Reinforced Polyamide
2	DP60S-24T-38H	24	145.95	148.0	φ55	25.4	Hexagonal 38 Cold finished steel bar	
3	DP60S-24T-40S	24	145.95	148.0	φ55	25.4	Square 40 Cold finished steel bar	

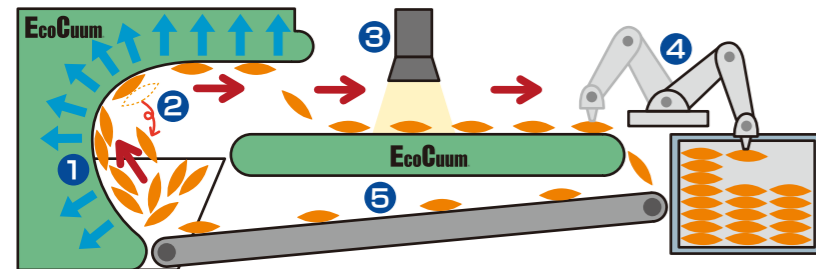
# Application examples

no.01

EcoCuum Efficiently Separates Small Packages  
**Sorting System**



Increases automation and labor saving for setup of small packages



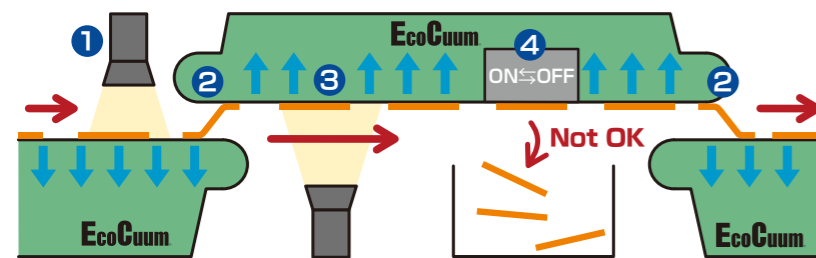
- 1 Sorting** Take out from hopper
- 2 Overlap** Overlapped products will be sorted with inverted conveyance
- 3 Positioning** Sensor recognizes products position and direction
- 4 Picking** Picking and placing of products
- 5 Return Conveyor** Products return to hopper that could not be picked

no.02

Two advantages  
**Double sided inspection system**



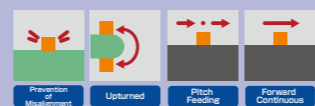
Increases automation and labor saving for inspection



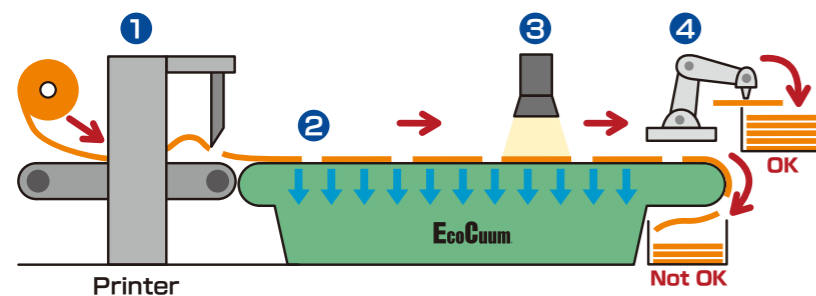
- 1 Front inspection** Improves accuracy and stability of inspection while adsorbing back side of product to keep accurate position.
- 2 Transfer** Transfer from front to back or back to front within the thickness of the products.
- 3 Back inspection** EcoCuum does not need inversion device and offers space reduction for inspection area since it adsorbs front side of products and inspects back side.
- 4 Defective products.** Defective products can be sorted when vacuum is temporarily cut off.  
※Patent Pending

no.03

Automate printing of roll paper with 100% inspection  
**100% inspection**



Increases automation and labor saving for inspection



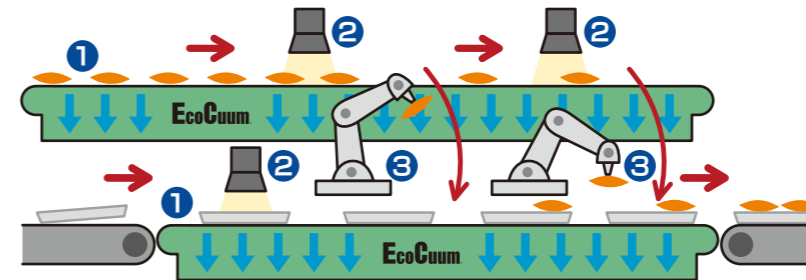
- 1 Printer** Print and cut
- 2 Warpage** Adsorption prevents warpage
- 3 100% inspection** 100% inspection for printing defects
- 4 Sorting** Sort good products from defective products

no.04

Increases automation and labor saving with camera / robot  
**Stable conveyance for light weight products**



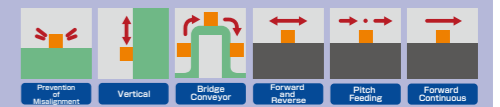
Increases automation and labor saving



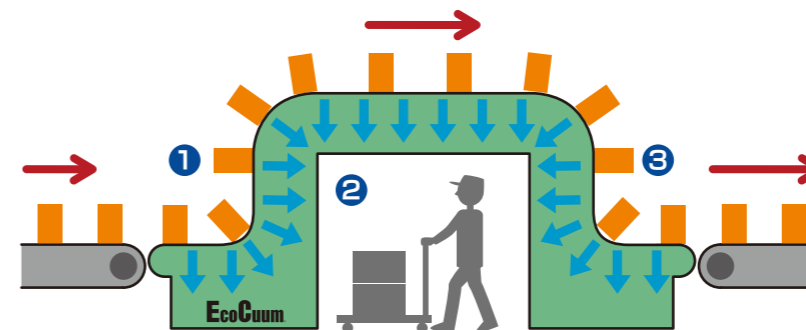
- 1 Stable Conveyance** Light weight tray and products are conveyed without misalignment.
- 2 Positioning** Camera recognizes product position and direction.
- 3 Pick and Place** Prevents tray misalignment through adsorption

no.05

Continuous conveying without blocking passageway.  
**Bridge Conveyor System**



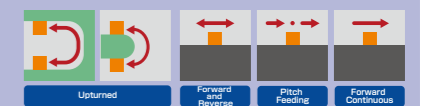
Shorten Downtime



- 1 Vertical Lift** The products are lifted vertically with the shortest line.
- 2 Passage** Bridge system allows continuous conveying without blocking passageway.
- 3 Vertical Drop** Products are dropped down with the shortest line.

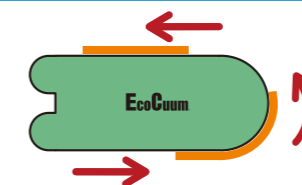
no.06

Ability to continuously reverse products direction and orientation  
**Lateral and Inverted Conveying**



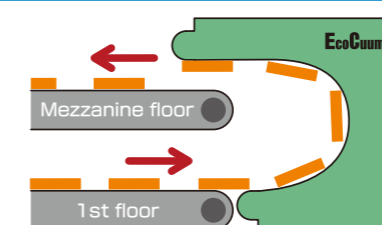
**Turn Conveyance**

Direction and orientation of products can be reversed at radius, including thin materials such as paper or film.



**Continuous Up and Down Turn**

Small boxes or pouches can be lifted continuously through up turn from the 1st floor to the mezzanine floor line. Down turn also available.



**Reverse Direction and Orientation**

Direction and orientation of light weight products can be reversed.

