



Manufacturing company of Agricultural product sorter

www.jyind.co.kr

Total Solution System FROM SORTING OF PRODUCE TO PACKAGING AND RELEASING

Leading the future of agriculture based on the accumulated know-how and technology, **Jinyoung Industries Co., Ltd.** Does its best to commercialize the best agricultural products by securing the competitiveness of AI (artificial intelligence) non-destructive sugar screening systems, including agricultural product sorting machines.







Company name	Jinyoung Industries Co., Ltd
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CONTENTS

1 Introduction of 'Jinyoung Industry'

Summary & Vision	 p.2
History	 р.4
Certificate	 p.5

2 Sorting line

Product

rioddet	
- Tangerine	р.6
- Apple	р,8
- Paprica	p.10
- Korean Melon	p.12
- Watermelon / Melon	p.13
- Chili pepper	p.14
- Tomato	p.15
- Korean pepper	p.16
- Free-tray	p.17
- Zucchino	p.18
- Sweet pumpkin/Kohlrabi/Strawberry	
Sorting line by shape (Lift roller)	
- Lift rolelr	p.20
- Baby plum tomato	p.21
- Onion sorter	p.22
Electronic metric sorter	
- Carrier(4-row), Sweet persimmon	p.23
- Lower-down	p.24
- Carrier	p.25
Metric weight sorter	
- Auto & Semi auto	p.26
- Linage brush	р.27
Circular sorting line by weight	
- High floor, Low floor	p.28

3 Pre-processing

Processing line p.29 Processing line p.30 - Pre-processing(Cleaning line) p.30 - Cabbage cleaning/pickling p.31

- IQF p.32		00.000.90	ere arring,	p.e	10101
	-	IQF			p.32

4 Auto robot system

Auto loading system by robot arm				
Depalletizer				
- Robot arm method	p.34			
- Screw method	p.35			

5 Smart APC

Smart APC(Data processing)	p.36
Non-destructive sugar level, color system, Al system	p.37
Measuring device with AI	p.38

HISTORY

PRESENT - 2020	2023	12 6 5	Installing Korean melon AI separator at Wolhang Nonghyup First installation of AI outputting line at Kimhwa Nonghyup Installation of Paprika automatically loaded system at Unbong Nonghyup
	2022	11 6	Installation of non-destructive sorting line for Tangerine at Wimi Nonghyup Installation of AI sorting line for Korean melon at Seongju Korean melon horticulture Nonghyup Membership of the Korea International Trade Association
	2021	4 3	Selected IBK Industrial Bank of Korea's Family Companies Technology Innovation Small-Medium Enterprises (INNOBIZ)
	2020		Establishment of strategic cooperative relationship with Mitsui Metals Co., Ltd Exported onion weight, camera (shape) sorter to Japan
2019	2019	8	Management Innovative Small and Medium Enterprises (Main-Biz) selected
- 2000	2018	2 1	Export of Citrus electronic sorter to Japan First installation of Tangerine and type of Hanrabong at Jeju Tangerince Nonghyup
	2017		Installation of a Nitrogen Fast Freezing Facility (IQF) for Toyae Distribution in Uiryeong-gun Export of paprika sorting line to Japan (North Sea) First installation of auto measuring device at Kimhwa Nonghyup Installation of the largest facility in korea for tomato sorter at Kimhwa Nonghyup
	2016	9	First installation of Korea's first measuring device with Open box at Jeju Tangerine Nonghyup Korea's first freetray with non-destructive device for Hanrabong sorter
	2015		Export of Electronic sorter to Kazakhstan Awarded by the Minister of Trade, Industry and Energy
	2014		Agreements for agricultural product sorting machines with AWETA in the Netherlands Certification of auto-safety verification Partnership with Mitsui Sugar Sense Technology
	2012	2	Expansion of the factory (89-32, Gimhae-daero 927beon-gil, Hallim-myeon, Gimhae-si, Gyeongsangnam-do)
	2011	3	Awarded the Minister of Knowledge Economy Award
	2009	12	Logistics Standard Facility Certification
	2008	6	ISO9001 certification
	2006	5 3	Development of Non-Destructive sugar level measurement device Certificate of direct production confirmation (Sorter, Cleaning, Washing)
	2002	9 8	Development of measuring device with net (small packaging) Development of Electronic sorter (Carrier Roller Type) - Registration at Agricultural Machinery Association
	2001	6 3	Designation of a nationwide post-service company for agricultural machinery (Medium size) Development of electronic sorter (bottom-down method) Conversion to Jinyoung Industrial Co., Ltd., Inc.
1999 - 1995	1998	6	Development of circular sorter (spring method) Joining the Korea Agricultural Machinery Cooperative
	1995	2	Establishment of Jinyoung Industries

CERTIFICATE

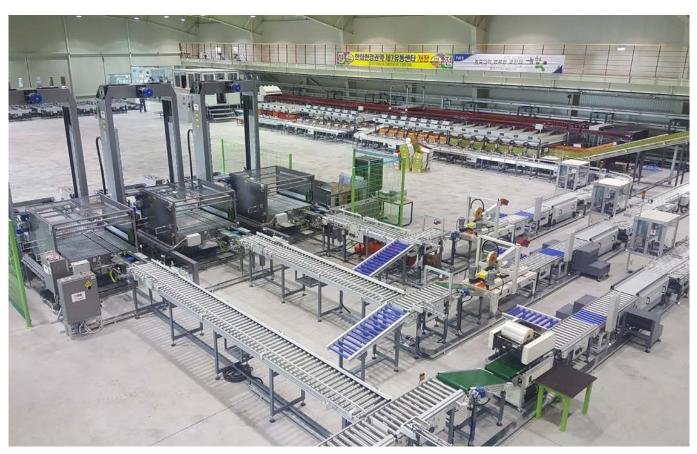
Our technology complies with strict quality and certification standards to provide trust and safety to our customers.

19



Hold multiple certificates

Sorting line of produce Automatic method of all line Non-destructive sorting line of sugar & Acidity - Tangerine



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Arranging section



Moving and visual-screening





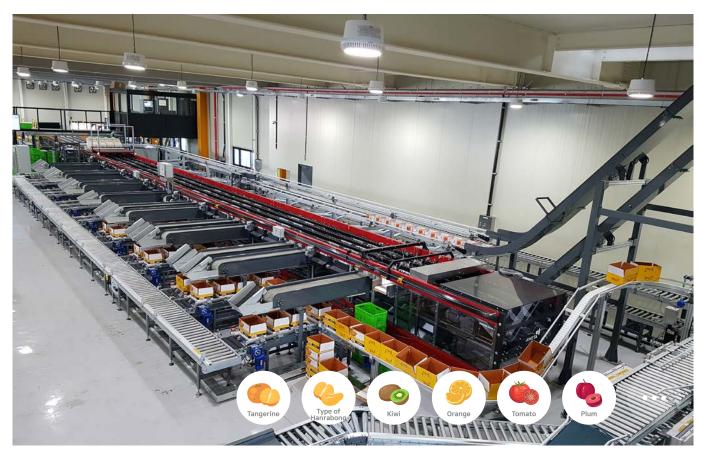
Brushing for cleaning



Check-weight section

Smart APC (Information Processing) Enhancements and Auto-labeled Prints Line Configuration: Input - Screening - Packaging one-row & two-row space

Open box automatic packaging for ex. Hallabong, Cheonhyeolang, Redhyang can be selected







Weighing part (Container, A type)





Weighing part with box (A type)





Cleanser of cup

Sorting line of produce Non-destructive sorting line of sugar & Acidity – Apple



Carrier method













Outlet line

Non-destructive sugar color device attached Improving input rate per hour and constructing a more stable sorting line Possible to construct 2nd floor trays Free-tray to prevent fruit crushing and improves screening speed



Free-Tray method



Inputting of fruit (one-row way)



Metric part











Packaging line(Label printed)



Sorting line of produce Sorting line – Paprica

Lower Down Electronic Screening (Building a Stable System with Advanced Technology)



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Manual method









Brushing conveyor 2





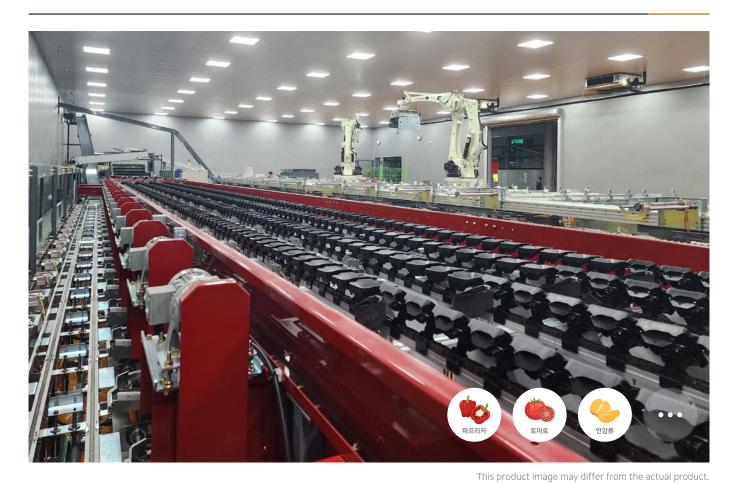
Visual screening



Packaging line



Formation of carrier-cup method Enhancing screening efficiency by applying Al outlet system



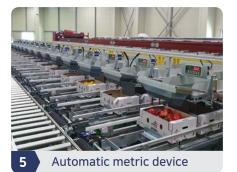
Automatic method







Dumping device







Auto-printer of label

Sorting line of produce

Non-destructive sorting line of sugar - Korean melon

Exclusive plate system for korean melon Systems by AI (Artificial Intelligence) Automatic measuring and small packaging lines



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Electronic sorter









Conveyor for small package



Sorting line of produce

Free-tray

Non-destructive sorting line of sugar & ripening level - Watermelon / Melon

. Method of Non-destructive sorting line of sugar & ripening level

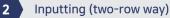




















Sorting line of produce Sorting line – Chili pepper

Automate input and metering systems > Increasing screening efficiency Function for automatic input system of pads







Auto-measuring device



Brushing conveyor 2



Final inspection and outputting





Auto-feeder of pads

Automatic method of all line Sorting line of produce Sorting line – Tomato

Smart APC (Information Processing) Enhancements and Auto-labeled Prints Line Configuration: Input - Screening - Packaging 5kg, line for both small packaging





Inputting hopper



Joined conveyor of distributing



Visual screening



Conveyor of transferring boxes





Lines for small packages

Sorting line of produce

Sorting line with non – destructive sugar tester device – Asian pear

Free-tray way : Using a tray to prevent crushing of raw materials Screening and Discharge Structure ; Simple to Use Easy to settle farm households using RF-ID method



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Sorting by tray









Returning empty trays

Sorting line of produce **Free-tray**



Popular type Maximizing efficiency at low cost

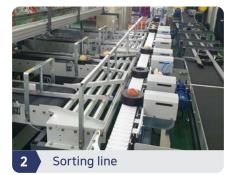


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Inputting line 1









Rejecting line



Transferring trays

Sorting line of produce Sorting line for Zucchino

Manua method



Inputting line
 Sorting line

3. Returning line

4. Outputting line

By shape sensor of camera



Sorting line of produce Sorting line for Sweet pumpkin / Kohlrabi / Strawberry

Sweet pumpkin / Kohlrabi





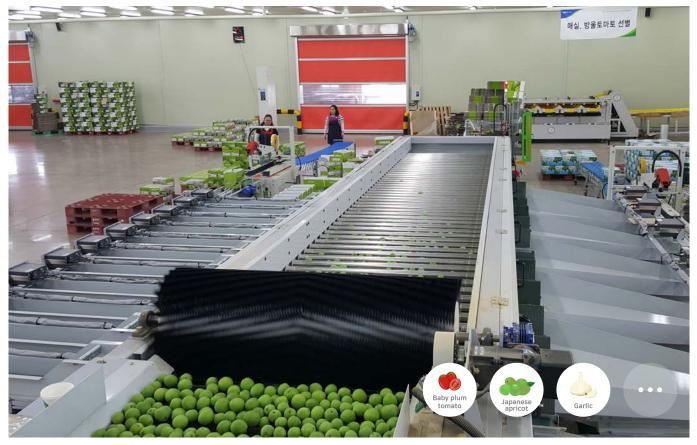
Strawberry



Steaming line / Cleaning / Packaging



Sorting line of produce Sorting line by shape – Lift roller















Sorting line of produce Sorting line by shape – Baby plum tomato



Lift-roller method















Sorting line of produce Sorting line - Onion

Characteristic

Improved screening speed and optimal screening of deformities



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Measuring device of mesh







Electronic metric sorter





Sorting line of produce **Electronic sorting line**

Application of 4th floor way G-type carrier method Minimizing return by improving payload ratio



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Sweet persimmons sorter









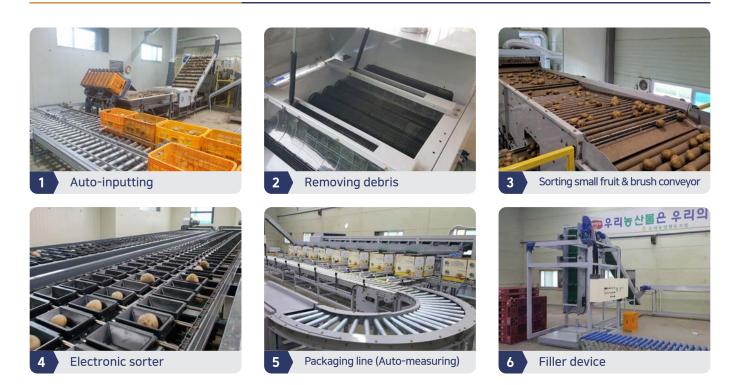


Sorting line of produce Electronic weight sorting line



Electronic sorter by lower down way





Sorting line of produce Electronic weight sorting line

Improving screening speed and safety by transferring fruit safely Possible to choose a carrier roller depending on the type of fruit Speed adjustable according to working conditions (selections)



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Name	Length x Width x Height	Category	Voltage	Capacity	Range	Error	
JYM-E10B-A	8,885 X 2,365 X 1,125mm	Eight-row					
JYM-E12B-A	9,640 X 2,365 X 1,125mm	twelve-row	220	(MAX.) per hour 20,000	50 ~ 600g	50 ~	+ 2g
JYM-E14B-A	10,615 X 2,365 X 1,125mm	fourteen-row	(380V)			+ 2g - 2g	
JYM-E16B-A	11,590 X 2,365 X 1,125mm	sixteen-row					

Sorting line of produce Mechanical weight sorting line

Minimizing damage of fruit Two types of automatic and semi-automatic Easy for usability and mobility



This product image may differ from the actual product.

Name	Length x Width x Height	Category	Voltage	Capacity	Range	Error
JYM-3308	8,885 X 1,625 X 1,000mm	Eight-row	220V, 220W Single plate			+ 5g - 5g
JYM-3310	4,885 X 1,625 X 1,000mm	Ten-row		per hour 7,200	80 ~ 600g	
JYM-3313	5,840 X 1,625 X 1,000mm	Thirteen-row	220V, 440W Single plate	~ 10,000pcs		
JYM-3316	6,955 X 1,625 X 1,000mm	Sixteen-row				

Line and alignment brush (washable) (Deportable Weight Sorter using Lever Principle) Designed with excellent durability and performance (made of new material plastic) Possible to select stably while fixed with measuring and rotational adjustment



This product image may differ from the actual product.

Name	Length x Width x Height	Category	Voltage	Capacity	Range	Error
JYM-3308	8,885 X 1,625 X 1,000mm	Eight-row	220V, 220W Single plate			
JYM-3310	4,885 X 1,625 X 1,000mm	Ten-row		per hour 7,200	80 ~	+ 5g
JYM-3313	5,840 X 1,625 X 1,000mm	Thirteen-row	220V, 440W Single plate	~ 10,000pcs	600g	- 5g
JYM-3316	6,955 X 1,625 X 1,000mm	Sixteen-row				

There would be no damage through the development of the transfer roller supply method, since the distance from the drop is short. Saving personnel expenses and time with fully automated system of supplying device of sensor and sorting Two types : high and low floor Easy to adjust zero-scale(Dial method) and so easily measure fruit quantities and box

Sorting line of produce Circular sorting line by weight



Specification



Patent 제0248276호 제0256095호

Name	Length	Width	Voltage	Capacity	Weight	Error
JY740-A0-08-1	2,800mm	Sorter 400mm Provider 500mm Hopper 600mm	220V, 90W Single plate	per hour 7,000 ~ 7,200pcs	About 120kg	+ 5g - 5g

Pre-processing **Processing line**











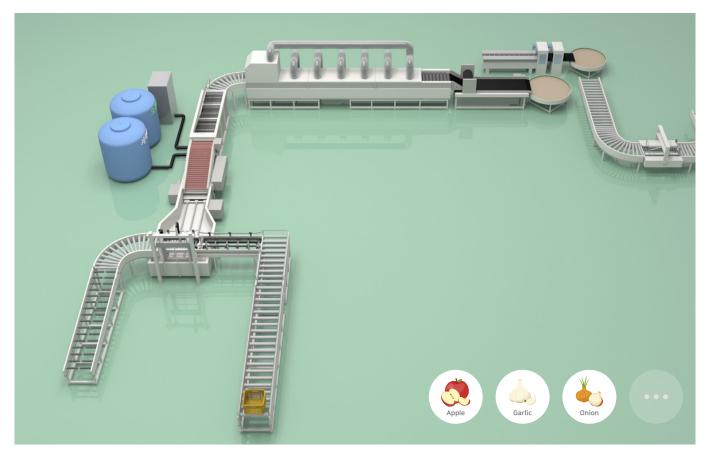


Steaming part



Pre-processing - Processing line Cleaning line

Possible to be treated by sterilized water (all sea water, ozone water, etc.) Water tank hopper washer Enhancing drying (dehumidifying) fuction











4 Packing line by three sides

Pre-processing - Processing line **Cleaning / Pickling line**



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Auto cleaning machine Δ



Two-row conveyor





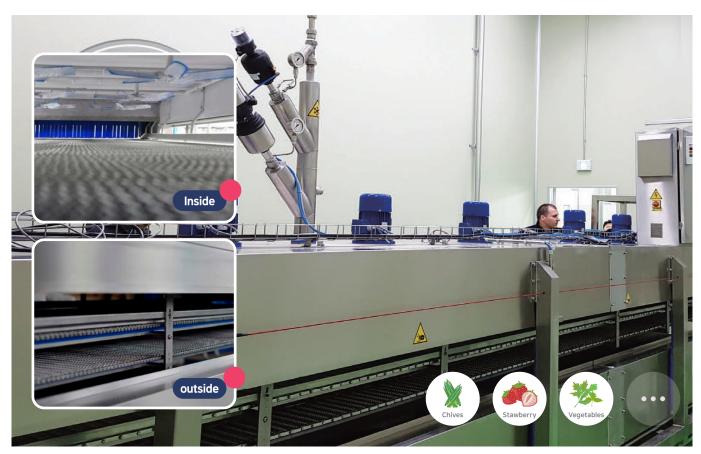


Metal extractor 6



Pre-processing - Processing line IQF - Indivisual Quick Freezing

Easy to freeze vegetable, fruit, marine product Possible to ripid cooling to -130 celsius(Ultracold)















Auto robot system Auto loading system by robot arm



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Fixed outputting line of pallet



Fixed load system





Auto robot system Depalletizer_Robot-arm method



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Name	Range	Length x Width x Height	Capacity	Loading stages (Max)
DPR-1001A-C	5,000 x 5,000mm	3,105 x 3,500 x 3,715	600 Box/1hr	Six-row

Auto robot system Depalletizer_Screw method

Patent 10-1934180



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Name	Composition	Range	Capacity	Loading stages (Max)
DPR-1001A-M	6 parts in total including roller conveyor and pusher device	6,000 x 6,500mm	900 Box/1hr	Six-row

Smart APC Smart APC(Data processing)

Managing input/output

Function of APC data system								
Information	Management of original	Management of sorting	Management of product	Management of balance accounts	Statistics / Operational Indicators	Receiving and paying material		
Farm Product/Meterial Customer Management of operating environment	Warehousing original Weighing vehicle Stocking Disimbursement of C/T	Establishment of sorting plan Inputting original Setting outlet Outcome of sorting	Contract Package Shipping Information of sale price	Setting of balance standard Price of shipping Bonus point Balance of farm	H.Q/branch management Shipment breaking news Daily work status Operation information of sorter	Information of stocking Information of releasing Management of inspection Stock condition		

Management of history tracking Standards of farm for all production processes



Integrated management of automation facilities ECS, Task instruction and performance collection, Monitoring



Real-time aggregation of screening process results



Smart APC Non destructive sugar level & Color system & Al system



Stage of class decision

Measuring weight Roadcell

Measuring A	
Camera	

0

3

Measuring sugar level

Measuring class

Measuring class

System of camera vision



Non destructive system





Speed : 7 to 10 per second

Measurement method

- Measurement of multi-frame by camera on top
- Possible to measure the size independent of posture of the fruit
 Possible to judge on real-time by its own algorithm

Measurement Items and Error Range

- Color: ±4% (measured 12 times with rotational images)
- Size: ±3% or less (measured 12 times with rotation image)
- Possible to detect severe cavity (depending on the raw material condition)

Measurement method

- Transmitted light scheme of visible/near-infrared region
- Using halogen lamps with wide band wavelength
 - Automatic correction of fluctuations according to temperature in the internal quality determination operation controller

Measurement Items and Error Range

- Color: ±4% (measured 12 times with rotational images)
- Size: ±3% or less (measured 12 times with rotation image)
- Possible to detect severe cavity (depending on the raw material condition)

Example of internal fault with non-destructive internal quality sensor



Al will determine and inspect the size by learning samples for each grade(recognizing within 2mm of error)

Smart APC Measuring device with AI

Automatic screening of defects and loading separately Adopting an ultra-fast continuous inspection scheme (within 0.3 seconds) Color/shape/appearance maturity inspection (Being applied separately based on peak/offseason judgment criteria)

🕂 (주)진영신입 TTL : 455 G0 : 20 G1 61 1 56 G2 : 376 3.210 영상 비젼 시스 1 2 3 4 6 7 8 9 R5 R5 R5 R5 R8 R1 R1 R1 R1 🙏 (주)진영신입 특품 상품 보통 [Lane3]TTL: 1055 71 NaN [Lane4]TTL: 1072 土기위 71 NaN Korean melon Tangerine Tomato Paprika

Automatic method with lines

Partner Mitsui Metal Instruments Co., Ltd.



Total Solution System JINYOUNG

Jinyoung Industrial Co., Ltd. will provide customers with various agricultural and fishery product selection solutions with technology secured through continuous research and development for future agricultural development.

A reliable enterprise Our reliable agricultural products **Jinyoung Industry**

TOTAL SOLUTION SYSTEM JINYOUNG INDUSTRY



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