

We think environment first—

# HAN'A-SS

## Product Guide

Speed Sprayer(SS machine)  
Convenience Equipment Vehicle  
'Titan' Multipurpose Vehicle  
Special Equipment Vehicle  
Agricultural Fruit Sorting Machine





# HIGH TECHNOLOGY AND SAFETY HAN'A-SS

All employees of HAN'A-SS are making our best effort to develop products through continuous R&D by considering efficiency, convenience and durability as important.

## GREETING

Dear Customers,

We've been entering into market as well as overseas market with the business of specially equipped vehicle, disinfection and control equipment, agricultural machine and electronic fruit grader since its establishment in 1987.

We developed the first agricultural machine that combines speed sprayer and automobile mechanism in 1995, and it is now the standard for domestic SS machines.

In addition, we have developed a Free-Tray fruit sorting system capable of high-speed operation in 2018. We have been awarded the NET certification of new technology for the first time in Korea and were designated as agricultural machinery of new technology by Rural Development Administration, leading the domestic large grader market.

All employees and research institute are making our utmost efforts in product development and after management to expand the distribution market and to increase farm income by reducing production cost with minimum labor force and selecting high-quality and high efficiency.

Wishing you great success and happiness in your daily life.

CEO, HAN'A-SS Co., Ltd.

President

*Kim Nam-jae*



# Technological power recognized by Korea

Good  
design  
3 cases

Patent  
registration  
3 cases

Design  
restration  
8 cases

Trademark  
restration  
11 cases

## HISTORY

- 1992.11 Established company
- 1995.11 Localized first 500L tracked speed sprayer (SS machine) in Korea
- 1996.04 Selected as a promising medium sized company leading in 21C (Gwangju)
- 1996.11 Released first 600L wheel type SS machine in Korea
- 1998.11 Developed and released PTO function for 1TON cart for the first time in Korea
- 2001.09 First 1TON wheel type self-proper muckspreader in Korea
- 2001.09 Developed and released the first self-proper liquid fertilizer spreader in Korea
- 2002.10 Released first 100L wheel type SS machine in Korea
- 2003.12 Released first 2000L wheel type self-proper liquid fertilizer spreader in Korea
- 2004.04 Registered as a special automobile manufacturer (Ministry of Construction and Transportation)
- 2004.11 Certified as a venture company (Ministry of SEMs and Startups) / (Venture section) Awarded Small and Medium Business
- 2005.02 Certified company affiliated research institute (Korea Industrial Technology Association)
- 2005.03 Developed 1000L cabin wheel type SS machine
- 2005.12 Selected as a superior technology company (Korea Technology Credit Guarantee Fund)
- 2006.06 Selected as innovative SME (INNO-BIZ) (Ministry of SEMs and Startups)
- 2006.10 Released long distance disinfection and control machine (Patent registered, vehicle mounted type)
- 2006.12 Awarded the prize of Ministry of Agriculture and Forestry
- 2007.03 Concentrated drug spreader was selected as excellent procurement item (Public Procurement Service), Acquired performance certification
- 2007.05 Power liquid fertilizer spreader was selected as excellent design product (GD mark)
- 2007.12 Awarded the citation of director of Rural Development Administration
- 2008.04 Awarded the prize of Prime Minister in 2009 (Prime Minister / Minister of Public Administration and Security)
- 2008.04 Selected as a patented company (Korea Invention Promotion Association)
- 2008.06 Long distance disinfection and control equipment was selected as excellent procurement item (1000L~2000L)
- 2008.09 Released environment-friendly microorganism wide area spreader
- 2008.12 Awarded the prize of governor of Jeollanam-do
- 2009.08 Long distance disinfection and control vehicle / Forest fire extinguishment vehicle
- 2010.06 Environment-friendly wide area spreader was selected as excellent design product (GD mark)
- 2010.11 Released the only 1000L tracked SS machine (for both disinfection and transportation)
- 2011.09 Applied 2 patents of incline wide area weeder
- 2011.12 Released the only 2000L self-propel pest control machine(Intuition type)
- 2012.02 Developed and released 1000L integrated disinfection vehicle-battery type
- 2012.04 Released 1000L wide area spreader
- 2012.06 Patent technology - track clearer for vehicles - exclusive license contract (Gwangju Nam-gu Office)
- 2012.11 Released 4000L wide area spreader and 1000L SS machine only for diesel
- 2012.12 Best prize of Knowledge Industry Support Project (Foundation of agricultural technology practice)
- 2013.03 Selected as Best Tax Payment Company' on 2013 Taxpayer's Day
- 2013.03 Developed and released 1000L NEW cabin wheel type SS machine
- 2013.07 Awarded the prize of governor of Jeollanam-do
- 2013.09 Cabin speed sprayer machine was selected as excellent design product (GD mark)
- 2013.09 Awarded "Industrial Packaging" of science technology of Ministry of Agriculture, Food and Rural Affairs
- 2014.07 Registered design of cabin pesticide control vehicle (Korean Intellectual Property Office)
- 2014.07 Developed and released 600L NEW wheel-type SS machine
- 2014.11 Registered the patent of shock limiter of crawler vehicle (HA-500CM III)
- 2015.01 Certified as "Luxury Small Hidden Champion" in Gwangju
- 2016.03 Developed and released large scale grader for agricultural product distribution center
- 2016.12 Selected as "Human Resource Cultivation SME" by Ministry of SEMs and Startups
- 2017.04 Developed N/D screening system of free tray
- 2017.05 Selected as "Excellent SME" by Ministry of Employment and Labor
- 2017.06 Long distance disinfection and control machine was selected as procurement excellent product (1000L~2000L)
- 2017.12 "Patent application" of free tray N/D screening system
- 2018.01 Certified as "New Technology Agricultural Machine" (Rural Development Administration)
- 2018.08 Acquired NET new technology certification - Free tray grader (Tray induction technology)

# Speed Sprayer (SS machine)

[ Patent Registration ]

## 1000L Cabin SS Machine

HA-1000SCA II

4WD/4WS



Selected as Good Design by Ministry of Knowledge Economy

Division	HA-1000SCA II
Capacity (ℓ)	1000
Length*Width*Height(mm)	4250*1450*1380
Weight (kg)	1579
Engine type	Hyundai water cooling four-cylinder, 4-cycle
Engine horsepower, fuel	65HP, diesel
Number of speed-changing step	forward in fifth, backward in first, secondary shift gear in third
Running speed (km/h)	1.6 ~ 19
Running type	4-wheel drive, 4-wheel steering
Pump output	100ℓ/min
Air flow rate	700m <sup>3</sup> /min
Air flow distance	12M
Alternation type	Bypass filter (Jet nozzle)

### More efficient and strong! Cabin SS machine cares about your health

- Strong power of 65 hp turbo intercooler diesel engine
- First free rear view in Korea
- Air conditional, heater, car audio system, rear camera and air filter are mounted



HAN's powerful 4X4 transmission



Turbo intercooler diesel engine

## 1000L / 600L Wheel SS Machine

HA-1000WMS VI / HA-600WMS V

4WD/4WS For cart as well



HA-600WMS V ▶

◀ HA-1000WMS VI



Excellent accessibility even in small area with its compact



intuitive control panel

### Control time, shortened to half

- Equipped with US Kohler's 25 hp engine that has strongest power and superior durability in Korea
- 1000L of sufficient capacity is enough to mix the medicines at one and shortens the control time
- Equipped with individual pressure regulator for control sprayer (Patent registered)

Division	HA-1000WMS VI	HA-600WMS V
Capacity (ℓ)	1000	600
Length*Width*Height(mm)	3945*1400*1325	3530*1395*1270
Weight (kg)	1432	1318
Engine type	Kohler air-cooling 2-cylinder 4-cycle	
Engine horsepower, fuel	23HP, gasoline	20HP, gasoline
Number of speed-changing step	Forward in fifth, backward in first, secondary shift gear in third	
Running speed (km/h)	1.5 ~ 14.4	1.5 ~ 14.7
Running type	4-wheel drive, 4-wheel steering	
Pump output	100ℓ/min	
Air flow distance	10M	
Air flow engine, horsepower	Hyundai Gamma engine, 61/50 (Max / rated)	
Whether it is combined	Combined	
Alternation type	Bypass filter (Jet nozzle)	

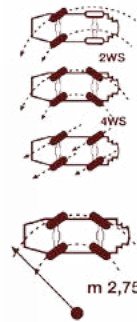
# Speed Sprayer (SS machine)

[ Patent Registration ]

## 1000L SS Machine (Diesel Only)

HA-1000WSD

4WD/4WS



Division	HA-1000WSD
Capacity (ℓ)	1000
Length*Width*Height(mm)	3850*1450*1345
Weight (kg)	1435
Engine type	Hyundai water cooling four-cylinder, 4-cycle
Engine horsepower, fuel	65HP, diesel
Number of speed-changing step	Forward in fifth, backward in first, secondary shift gear in third
Running speed (km/h)	1.6 ~15.5
Running type	4-wheel drive, 4-wheel steering
Pump output	100ℓ/min
Air flow rate	700m <sup>2</sup> /min
Air flow distance	12M
Alternation type	Bypass filter (Jet nozzle)

### Free changing of speed and powerful power SS

- Equipped with shock absorbing seat for operator (Patent registered) / Direct air flow system with Hyudai 65 hp engine
- Forward in fifth, backward in first, secondary shift gear in third system (4-wheel high speed, 2-wheel high speed, 4-wheel low speed)
- Free changing of speed and able to shift 2-wheel and 4-wheel during driving

## 500L Track SS Machine

HA-500CM III

For cart as well



Enhancing stability with ultra-wide crawler



Excellent driving frame structure, enhanced riding comfort

Division	HA-500CM III
Capacity (ℓ)	500
Length*Width*Height(mm)	3200*1255*1325
Weight (kg)	1119
Engine type	Kohler air-cooling 2-cylinder 4-cycle
Engine horsepower, fuel	20HP, gasoline
Number of speed-changing step	Forward in fifth, backward in first, secondary shift gear in second
Running speed (km/h)	1.5 ~ 6.7
Running type	Pedrail type
Pump output	100ℓ/min
Air flow distance	10M
Air flow engine, horsepower	Hyundai Gamma engine, 61/50 (Max./rated)
Whether it is combined	Combined
Alternation type	Bypass filter (Jet nozzle)

### Show better performance in extreme uneven terrain

- Equipped with shock absorbing seat for operator (Patent registered) / Crawler tension better system (Patent application)
- Compact design (Smallest size in same leve, sufficient operating space)
- Ultra-wide crawler (250mm) and large caliber trackroller, Long track (48 links)

# Convenience Equipment Vehicle

[ Patent Registration ]

## Cart for 1 ton SS machine

HA-1000ACE III

4WD/4WS For SS as well



### HAN'A Unique driving system- Closest to the car

- Able to shift 2-wheel and 4-wheel drive as well as high-speed and low-speed
- Equipped with powerful and durable US Kohler engine



## Cart for 0.55 ton SS machine

HA-500ACE

For cart as well



### Optimal cart function- Excellent performance in uneven terrain

- Low floor structure and compact carrying function:  
Convenient to work in low floor and low area
- Adopted 3-stair tandem system with an emphasis on durability

Division	HA-1000ACE III	HA-500ACE
Loading volume (kg)	1000	500
Length*Width*Height(mm)	3440*1410*1380	2830*1245*1210
Weight (kg)	990	750
Engine type	Kohler air-cooling 2-cylinder 4-cycle	
Engine horsepower, fuel	20HP, gasoline	
Number of speed-changing step	Forward in fifth, backward in first, secondary shift gear in third	Forward in fifth, backward in first, secondary shift gear in second
Running speed (km/h)	1.5 ~ 14.9	2.1 ~ 6.6
Running type	4-wheel drive, 4-wheel steering	Pedrail type
Whether it is combined	Combined	
Alternation type	Bypass filter (Jet nozzle)	

## 0.8 ton Track type/ 1 ton Wheel type Compost Spreader

HA-800MSC / HA-1000MS II (III)

For cart as well



- Excellent driving ability for wetlands, uneven terrain and rough terrain
- Economical selection is possible since it can be used SS as well

Division	HA-800MSC	HA-1000MS II
Loading volume (kg)	800	1100
Length*Width*Height(mm)	3345*1330*1380	3630*1410*1480
Weight (kg)	1250	1357
Spray width (M)	4	6
Running type	Pedrail type	4-wheel drive, 4-wheel steering
Engine type	Kohler air-cooling 2-cylinder 4-cycle	
Engine horsepower, fuel	20HP / gasoline	
Number of speed-changing step	Forward in second, backward in first, secondary shift gear in second	Forward in fifth, backward in first, secondary shift gear in third
Maximum speed (km/h)	High speed (6.9)	1.5 ~ 14.2
Spray method	Disk rotary type	
Alternation type	Mechanical (Selective interlocking)	

※ Product appearance, specifications and options may modified without prior notice depending on circumstances of manufacturer.

# 'Titan' Multipurpose Vehicles

[ Patent Registration ]

## Titan Multipurpose Cart

HA621

4WD/4WS For SS as well



Division	HA621
Loading volume (kg)	1000
Length*Width*Height(mm)	3840*1560*1630
Weight (kg)	1394
Engine type	Kohler air-cooling 2-cylinder 4-cycle
Engine horsepower, fuel	20HP, gasoline
Number of speed-changing step	Forward in fifth, backward in first, secondary shift gear in third
Driving speed (km/h)	(forward) 4.0 ~ 30 / (backward) 3.6 ~ 7.0
Driving type	2-wheel / 4-wheel driving, 2-wheel / 4-wheel steering
Specification of cargo box (mm)	2210*1265*265 (Inner)
Options	Spray (80A), Electric winch, for grass Wide tire auxiliary sheet or hose reel (30M)

### Stable cart with low-centered design suitable for multipurpose use

- Reduce conduction risk with lower-centered design of engine and mission / Comfortable ride feeling with front suspension
- Equipped with transmission for automobile which 2-wheel-4-wheel driving and high speed-low speed shifting is available during driving (For the first time in Korea)

## Titan Reagent Control Equipment

HA621G-S

4WD/4WS



Division	HA621G-S
Loading volume (kg)	1000
Length*Width*Height(mm)	3840*1560*1630
Weight (kg)	1394
Engine type	Kohler air-cooling 2-cylinder 4-cycle
Engine horsepower, fuel	25HP, gasoline
Number of speed-changing step	Forward in fifth, backward in first, secondary shift gear in third
Running speed (km/h)	1.5 ~ 30
Running type	4-wheel drive, 4-wheel steering
Whether it is combined	Combined
Power sprayer (l / min)	160 (Ceramic piston)

### Protect grass with stable driving and short turning radius

- Applied wide tire for grass use with the same standard of 4-wheel (24X12.00-12) / Applied screw height adjustment that is free for stray angle and adjustment
- Prevent power loss of driving vehicle by mounting 25 hp gasoline engine to 1000L reagent tank

## Titan Compost Spreader

HA-1500MS

4WD/4WS For SS as well



Division	HA-1500MS
Loading volume (kg)	1400
Length*Width*Height(mm)	3860*1615*1555
Weight (kg)	1813
Width of spray (M)	2
Engine type	Kohler air-cooling 2-cylinder 4-cycle
Engine horsepower, fuel	20HP, gasoline
Number of speed-changing step	Forward in fifth, backward in first, secondary shift gear in third
Maximum speed (km/h)	1.5 ~ 30
Running type	4-wheel (Able to select 2-wheel and 4-wheel)
Drive clutch	Disc friction type (dry)
Alternation type	Selective interlocking

### Large capacity self-propel Compost Spreader- First in Korea (1.4ton)

- Excellent driving ability with 4-wheel drive that is superior in uneven terrain and rough terrain
- Equipped with various functions for convenience of operator

## Special Equipment Vehicle

### Environment friendly micro-organism Wide Spreader

HA-1000EWS II / HA-4000EWS II



#### Mighty Power! - 300 hp Engine

- Achieved 150M control reaching distance (First time in Korea)
- Adjust control system conveniently with the wireless remote controller (Maximum effective distance within 1km)
- Prevent of chemical fluids (First time in Korea)
- Up and down 20° Right and left 330° : Free spraying radius with 3-step spraying method

Division		HA-1000EWS II	HA-4000EWS II
Type name	Type name	D4BB T/C	D6AZ-G1
	Rectification	Erect type, water-cooling 4cylinder, 4-cycle diesel	Water-cooling type, 6-cylinder turbo diesel
	Total displacement (cc)	2607	11149
	Maximum output (ps/rpm)	64 /2500	300 /2200
Fuel tank (ℓ)		40	200
Drug tank capacity (ℓ)		1000	4000
Waterworks	Method	Jet pump	WB30XP
	Amount (ℓ/min)	170	1000
Agitator		Bypass filter (Jet nozzle)	Mechanical (propeller)
Type	Type	Axial flow	
	No. of commercial rotation (rpm)	2500	1900
	Maximum wind direction (m <sup>2</sup> /min)	588	4215
	Spray distance (m)	50	150
	Turning angle (up and down)	25°	330°
Turning angle (left and right)		270°	20°
Equipped vehicle		1 ton	3.5 ton ~ 5 ton



# Special Equipment Vehicle

## Detachable remote distance disinfection and control equipment

HA-1000CSG II



- Air flow duct that rotates every direction
- Save manpower with one-man operation and quick control work
- Various rotation angles
- 2Way and remote spray system
- Designed for optimum stability and comfortable working environment
- F.R.P cylindrical duct
- Perfect control system and 27 hp US Kohler engine
- Convenient hydraulic attachment
- Select customized options

Division	HA-1000CSG II	
Length*Width*Height (mm)	4420*1675*2300	
Weight (kg)	1145	
Engine type	V type air-cooling 2-cylinder 4-cycle gasoline engine	
Maximum output (kw(ps))	16.2	18
Continuous rated rotational speed (rpm)	3000	3600
Air flow engine	Fule	Gasoline
	Tank capacity (ℓ)	30
	Type of lubrication	Over SAE 10W-30
	Capacity (ℓ)	1.9
	Operating voltage of start motor (V)	12
Air flow device	Capacity of storage battery (ah)	45
	Maximum torque (kg/m)	13
	Tank capacity (ℓ)	800
	Spray method	Centrifugal type, side stream type
	Discharge caliber (Ø)	Ø380
Spray device	Air volume (m <sup>3</sup> /min)	196
	No. of rotations used (rpm)	3500
	Maximum spray distance (m)	30
	Type	YH-1000A
	Type	Horizonetal type three plunger type
Spray device	No. of rotations used (rpm)	750
	Nozzle type	Disc type
	Blow head (Ø-no.)	Ø1.0-6, Ø1.2-6, Ø5-1

## Electric remote distance disinfection and control system

HA-100CSE II



**Cattle disease disinfection vehicle with environment-friendly electric power / Various works with patented air flow FRP duct**

- Adopt semi-permanent BLDC motor
- Function to prevent freezing of drug tank
- Function to remove residual drug liquid with air circulation system
- Present overload with circuit protection breaker

Division	HA-1000CSE II		
Driving part (mm)	Gear 4-wheel drive Kingcap		
Tank capacity (ℓ)	800		
BLCD motor	No loading	Rated speed (rpm)	3800
	loading	Maximum power (km)	1.5
		Rated speed (rpm)	3000
		Rated / Momentary torque (kg/rpm)	48.73 / 97.46
	Rates / maximum current (A)		50 / 150
Highpressure sprayer	Piston type		YH-80
	No. of rotation (rpm)		400 ~ 500
	Absorption capacity (ℓ/min, 500rpm)		32 ~ 41
Reel hose (m)		50	

## Multipurpose disinfection and control equipment

HA-1000CSGJ



- Convenient and simple work is available with remote controller operating
- Equipped with powerful 27 hp engine
- Maximize the amount of wind with special impeller (aluminum alloy)
- Minimize turning radius when mounting multi-purpose work
- Excellent in pest control of landscaping by adjusting rotation angle in all directions
- 1 device can serve as air blower (cleaning), reagent and fertilizer

Division	HA-1000CSGJ	
Loading volume (kg)	1700*2230*1300 (Only for unit)	
Weight (kg)	700 (Dry weight)	
Capacity (ℓ)	1000	
Engine	Type	US Kohler engine air-cooling 4-cycle
	Horsepower (HP)	27
	Fuel	Gasoline
	Fuel tank capacity (ℓ)	40
Control device	Remote controller adjustment of air volume / direction (nozzle)	
Air flow part	Type	160A (Non grease ceramic)
	Wind speed (m/s)	27 (3000RPM)
	Maximum spray amount (ℓ/min)	146 (Based on sprayer 800RPM)
	Spray distance (m)	30-35 (Side 45 degree, 40m)

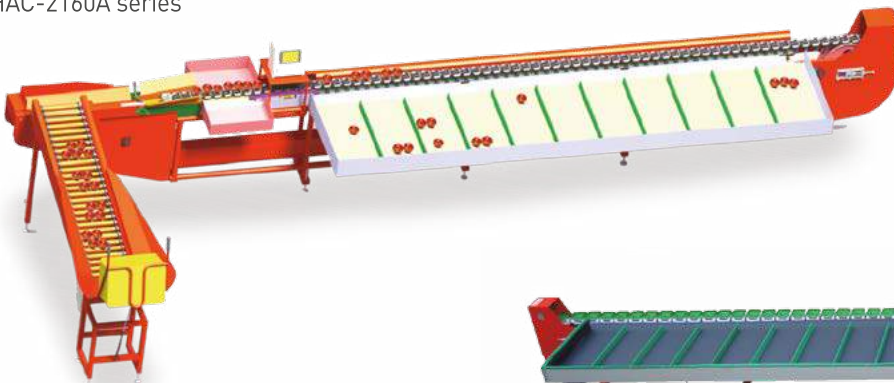
# Agricultural Fruit Sorting Machine

Cup type grader  
HAB-1080A

## Cup type High-Speed Grader

### Carrier high-speed Grader

HAC-2160A series



### Entry-level Weight Grader

HAS-7200A series



### Electric fruit grader with convenient touch screen type

- Customer-oriented customized design: Touch screen type, fruit tree setting, daily workload display
- Innovative product design: Soft emissions, expandable screening grades (10-36)

HAC-2160A Series				
Type name	HAC8-2160A	HAC10-2160A	HAC12-2160A	HAC16-2160A
Area of installation	3500W*6700L	3500W*7700L	3500W*8500L	3500W*9700L
Grade level	Level 8	Level 10	Level 12	Level 16
Required power	Single phase 220V or three phase 380V			
Grading of fruit range	20-1000g (Ø40-Ø120)			
Screening accuracy	±2g			
Judgment factor	Weight measurement			
Treatment ability	12,000 ~ 28,800EA / 1HR			
Subjects	Apple, persimmon, kiwi, plum, tomato, orange, onion, potato, etc.			
Control method	Touch computer method			

HAS-7200A Series					
Type name	HAS8-7200A	HAS10-7200A	HAS12-7200A	HAS14-7200A	HAS16-7200A
Area of installation	1400W*5240L	1400W*6000L	1400W*6800L	1400W*7560L	1400W*8350L
Including injector	1800W*7440L	1800W*8200L	1800W*8490L	1800W*9700L	1800W*10460L
Grade level	Level 8	Level 10	Level 12	Level 16	Level 16
Required power	Single phase 220V				
Grading of fruit range	20-2000g (Ø45-Ø130)				
Screening accuracy	±2g				
Judgment factor	Weight measurement				
Treatment ability	7300EA / 1HR				
Subjects	Apple, pear, peach, persimmon, kiwi, Hanrabong, citron, etc.				
Control method	Touch computer method				

# Free Tray Grader

## Free Tray Grader

HAF-SW120



### Customized design, large scale grader expandable to 24 steps

**Pressure figure prevention system** Maintain the product quality without any collision between raw materials by using special cushion of free tray

**Breakthrough packaging method** Able to do the largest packaging by improving packaging standby section

**Processing speed** Select 6EA per 1SEC by complementing the drawbacks of the tray (Processing speed maximum 21,600EA/hr)

**Compatibility** Able to attach non-destructive sugar content sensor, able to attach image reading device using camera



Non-destructive sugar content sensor

control box

electric control unit

Servo rejecter



weight (auto checker)

discharge standby (packaging & output)

attacher of caser & upper film

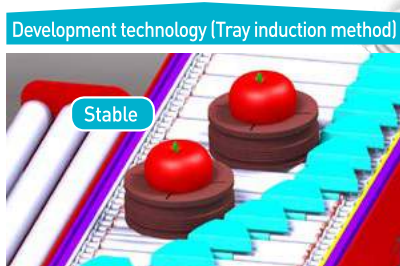
depalletizer

Division	HAF-SW120, HAF-SW108 (for each fruit tree)
Processing ability	21,600 EA/hr
Measurement method	Sugar content: transmission / Weight: Load sensor
Measurement range	Sugar content: 2 ~24Brix / Weight: 20 ~2,000g
Grading degree	Sugar content: within $\pm 0.5$ Brix / Weight: within $\pm 2$ g
Internal measurement	Sugar, acidity, browning, maturity, achene
Screening method	Free tray method
Screening grade	Expandable to more than 24 steps (customized design)



Shaking

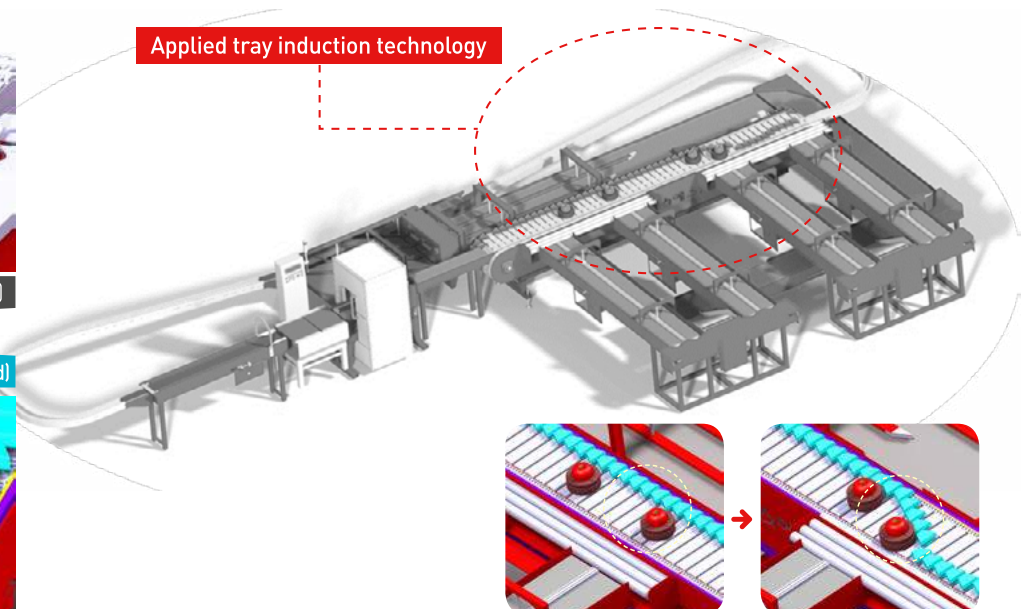
Conventional technology (Tray hitting method)



Stable

Development technology (Tray induction method)

### Applied tray induction technology



# Free Tray Grader

## Layout of standby of raw material tray and returning of empty tray

Judged tray ejected from the main grader is configured to temporarily standby for the packaging



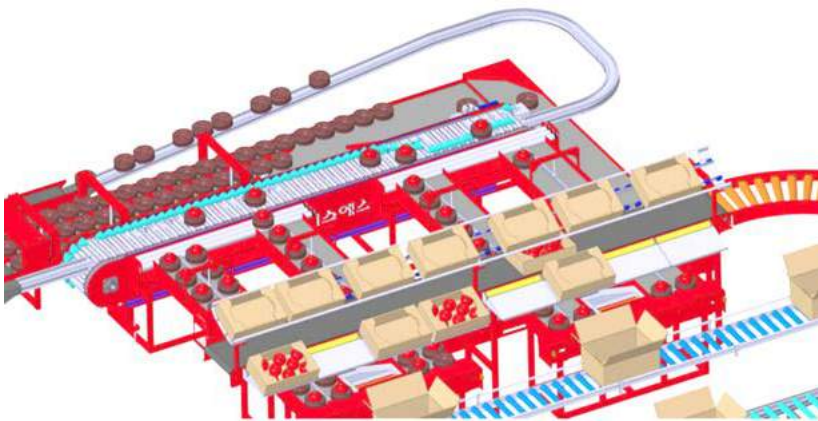
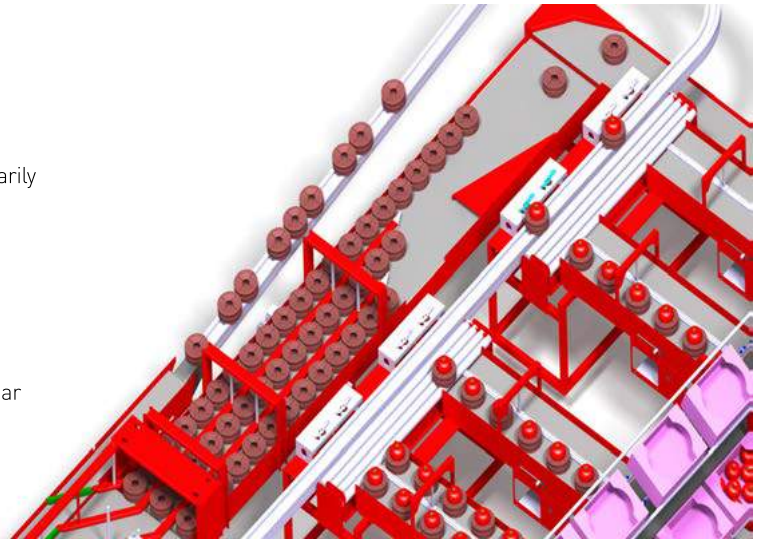
After packaging, empty tray is transported to feed conveyor line through returning conveyor



Continuous returning is available when acquiring each data of sugar content sensor, color sensor and shape sensor



Able to extend emission level according to the grade setting



## Layout of packing line

01

Open box packaging is located right in front of the operators, and raw materials transferred to the tray can be packed in an open box by the operator so that it can be packed easily

02

The folding box and container work is located right behind the operators and transported to the finished product conveyor



Discharge Standby Conveyor



Empty Tray Arrangement Conveyor



Empty Tray Insertio Standby Conveyor



Empty Tray Returning Conveyor



Empty Tray Returning Standby Conveyor



1. Warehousing raw container



2. Check the weight of raw materials



3. Visual screening of raw materials



4. Inspection of weight and internal quality



5. Joining section of group 2



6. Screening (tray induction technology)



7. Packaging (open box & folding box)

# Options

## Depalletizer



Loading capacity of raw materials: 30 containers / 1 pallet (6 containers \* 5 steps)

Maximum processing capacity: 720 containers / 1 hour

Auto loading of empty pallet (more than 10 pallets)

No A/S by manufacturing for industrial use

No loss of pressure when gripping raw container (100%)

## Automatic taping machine



## Weight checker



## Lift



## Caser

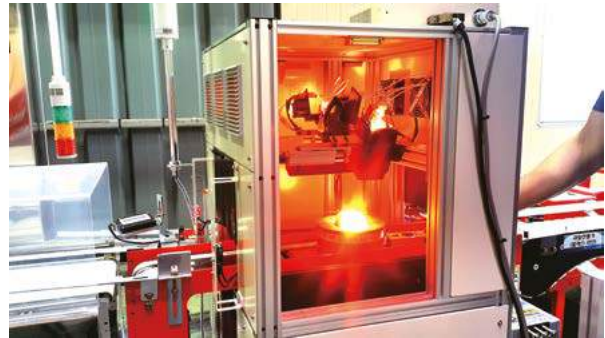


# Internal Quality Sensor

“ Can't non-destructive sensor detect internal abnormality?  
**Applied state of the art  
 spectrochemical analysis technology,  
 Sugar contents for sure! Internal quality!** ”

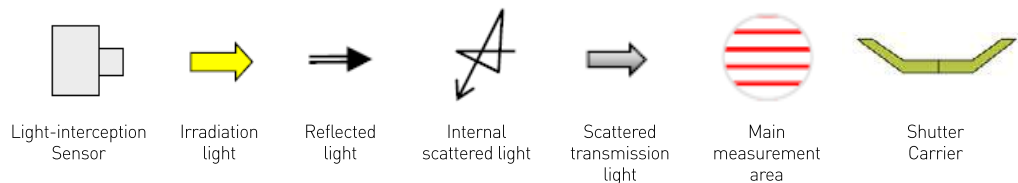


Mitsui Sensor (Cooperated with Japan)

















Name	QSCOPE-series
Processing speed	Max. 4EA/S
Measurement method	Transmission
Measurement range	7 ~ 24Brix (sugar contents)
Error range	SEP(Predicted standard error) within 0.5Brix
Internal measurement	Sugar contents, acidity, maturity, water core, browning, injuries

Whole transmission (left / right)	Whole transmission (up / down)		Whole transmission (up / down)	Lower transmission
QSCOPE-C series QSCOPE-V series	QSCOPE-M series (pineapple)	QSCOPE-T series QSCOPE-F series	QSCOPE-F series	QSCOPE-M series (watermelon, melon)
Measure whole sample	Measure whole sample		Measure upper part of sample	Measure lower part of sample



# Non-Destructive (sugar / acid) Sensor

(Sensor determinable factor)

															
		Apple	Pear	Peach	Watermelon	Melon	Oriental melon	Persimmon	Plum	Citrus	Mandarin	Onion	Tomato	Mango	Kiwi
Sugar content		●	●	●	●	●	●	●	●	●	●	-	●	●	●
Acidity		●	-	-	-	-		-	●	●	●	-	●	-	-
Maturity		●	●	●	●	●		●	-	-	-	-	●	●	●
Internal obstacle	Bitter	-	-	▲	-	-		●	-	-	-	-	-	-	-
	Achene	-	●	●	●	●		-	-	-	-	-	-	-	-
	Browning	●	●	●	-	-		-	-	-	-	-	●	●	-
	Water core	●	-	-	-	-		-	-	-	-	-	-	-	-
	Reduced juice	-	-	-	-	-		-	-	●	●	-	-	-	-
	Floated skin	-	-	-	-	-		-	-	●	-	-	-	-	-
	Decay	-	-	-	-	-		-	-	-	-	●	-	-	-
	Emptiness	-	-	-	●	-		-	-	-	-	-	●	-	-
selectable fruit by type	Cup type	●	●	●			●	●	●		●	●			
	Carrier	●						●	●	●	●	●	●		●
	Free Tray	●	●	●	●	●		●			●			●	




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