VISION SYSTEM

Inspection Machine using Camera Machine Vision Expert



Food & Beverage Vision Expert Gyro system Co., Ltd.

Greetings

Gyro System is a Machine Vision Expert Company for **Food & Beverage industry**.

Since our establishment in 2000, we feel sense of pride for playing a part in contributig to the food & beverage indsutry field's **automation line development and quality productivity increase**.

We will make greater effort to supply increasingly **stable system** based on our extensive **experience** and **technical know-how** in the food & beverage industry.

GYRO SYSTEM CO., LTD. CEO **Lee Kwon-Soo**

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HISTORY

2000	•	Gyro System established / Text recognition system de	eveloped
200	1 •	Cap inspection Machine developed	
200	2 •	Printing Quality inspection Machine developed	
200	3 •	Sorting system developed	Ħ
200	4 •	Food & beverage inspection Machine developed	· · ·
200	5 •	Incorporated	
200	7 •	Cap inspection Machine developed	
200	8 •	Date-Code inspection Machine developed	and the second
200	9 •	Gyro inspection Machine exported to China	Gyro Vision
2010	•	Gyro inspection Machine exported to Japan	
201	2 •	Gyro inspection Machine exported to Philippines	
201	4 •	Gyro inspection Machine exported to Myanmar	
201	5 •	Moved Main Office to Sangdaewon-dong,	
		Seongnam-si, Gyeonggi-do, Korea	
201	6 •	InLine inspection Machine developed and exported to	Japan 🧪



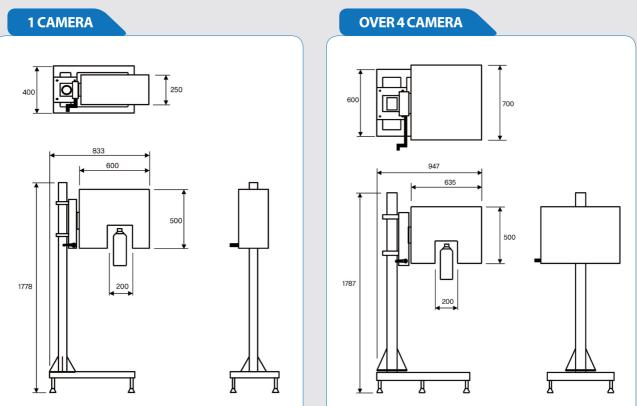
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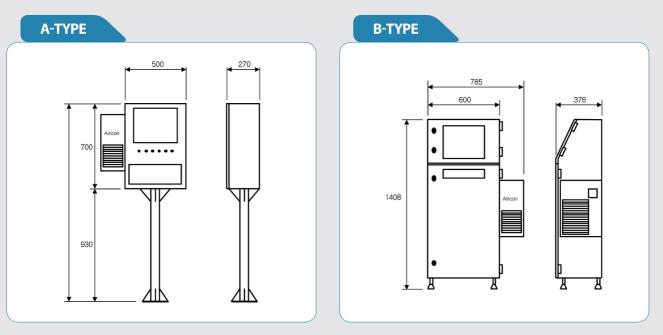
Machine Machine Vision

Drawing

INSPECTION HEAD



CONTROL PANEL



Gyro vision system

IN-LINE MULTI inspection machine > GV - 700





This is the Multi-Inspection Machine that inspects various type of product defects in a comprehensive manner, and diverse system configurations are enabled according to customer requirements.

·Label

Types of Defect

·Cap inspection ·Fill Level

·Date-Code ·Different cap ·other inspection

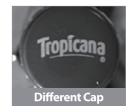
Product Feature

Maximum speed : 1600 bpm Rejecting by the type of defect ·Inspection image saving ·User friendly convenient operability and durability ·Remote control via Internet enabled ·Specialized Inspection machine designed for the industrial environment

Input Power : 220VAC, single phase, 50/60Hz Specification •Operating temperature : 0°C ~ 45°C ·Total weight : 800 kg















MODELS

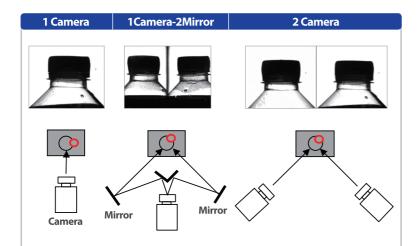
CAP inspection machine

PET CAP GV-500CP- PET



Description	This is the Inspection Machine that inspects the PET cap's Capping state after filling, and it inspects 1 Piece Cap, 2 Piece Cap, Color Cap and others. Various type of camera combination is enabled.(Cameras 1~4)		
Types of Defect	·Missing Cap ·High Cap ·Cocked Cap ·Broken Band(Bridge) ·Crack		
Product Feature	 ·Maximum speed : 1600 bpm ·Color Cap inspection enabled ·Inspection image saving ·User friendly convenient operability and durability ·Remote control via Internet enabled ·Specialized Inspection machine designed for the industrial environment 		

Specification·Input Power : 220VAC, single phase, 50/60Hz·Operating temperature : 0°C ~ 45°C·Total weight : 70 kg









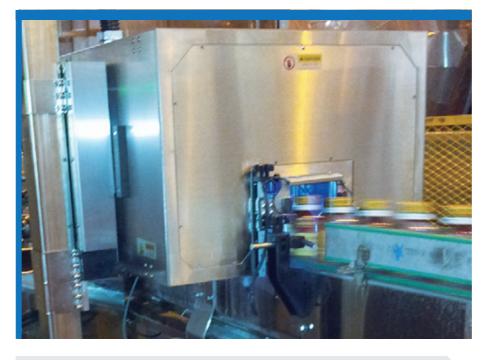






CAP inspection machine

ROPP CAP GV-500CP- ROPP



Description

This is the Inspection Machine that inspects the ROPP cap's Capping state after filling, and inspects without blind spot using 4 camera.



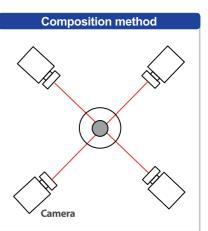
·Missing Cap ·Skirt ·Split ·Broken Band(Bridge) ·Crack



Maximum speed : 1600 bpm Color Cap inspection enabled Inspection image saving User friendly convenient operability and durability Remote control via Internet enabled Specialized Inspection machine designed for the industrial environment

Specification·Input Power : 220VAC, single phase, 50/60Hz·Operating temperature : 0°C ~ 45°C·Total weight : 90 kg

























This is the Inspection Machine that inspects the LUG cap's Capping state after filling, and composition of diverse method based camera is enabled.(Cameras 1~4)

·High Cap



Specification

·Missing Cap

Maximum speed : 1600 bpm
Color Cap inspection enabled
Inspection image saving
User friendly convenient operability and durability
Remote control via Internet enabled
Specialized Inspection machine designed for the industrial environment

·Cocked Cap

·Input Power : 220VAC, single phase, 50/60Hz ·Operating temperature : 0°C ~ 45°C · Total weight : 90 kg

Inspection image





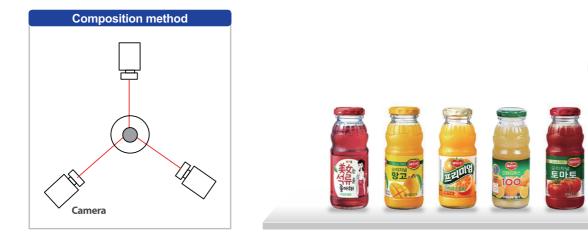








Product supplied to customer



CAP inspection machine

CROWN CAP GV-500CP- CROWN





This is the Inspection Machine that inspects the Crown cap's Capping state after filling, and composition of diverse method based camera is enabled.(Cameras 1~4)



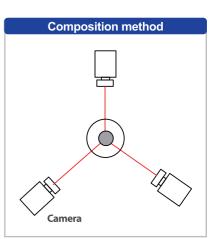
·Missing Cap ·High Cap ·Cocked Cap



Maximum speed : 1600 bpm
Color Cap inspection enabled
Inspection image saving
User friendly convenient operability and durability
Remote control via Internet enabled
Specialized Inspection machine designed for the industrial environment

Specification ·Input Power : 220VAC, single phase, 50/60Hz ·Operating temperature : 0°C ~ 45°C · ·Total weight : 90 kg

















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DATE-CODE inspection machine

PET BOTTLE GV-500DC - PET



Description

This is the Inspection Machine that inspects date and text printed on the PET product's cap and Shoulder after filling, and it inspects printing quality and accuracy.

Types of Defect ·No Printing·Blurred Character·Letter cut-off·Size-Modified



·Maximum speed : 1600 bpm ·Inspection method : OCR (Text Recognition) Pattern-Matching

Color Cap inspection enabled
Inspection image saving
User friendly convenient operability and durability
Remote control via Internet enabled
Specialized Inspection machine designed for the industrial environment

Specification·Input Power : 220VAC, single phase, 50/60Hz·Operating temperature : 0°C ~ 45°C·Total weight : 70 kg















·Mis Printing

DATE-CODE inspection machine





Description

This is the Inspection Machine that inspects date and text printed on the CAN product after filling, and it inspects printing quality and accuracy.



·No Printing ·Blurred Chara ·Letter cut-off ·Size-Modified

·Blurred Character ·Mis Printing ·Size-Modified



 Maximum speed : 1600 bpm
 Inspection method : OCR (Text Recognition) Pattern-Matching
 Inspection image saving
 User friendly convenient operability and durability
 Remote control via Internet enabled
 Specialized Inspection machine designed for the industrial environment

 Specification
 ·Input Power : 220VAC, single phase, 50/60Hz

 ·Operating temperature : 0°C ~ 45°C
 ·Total weight : 60 kg



















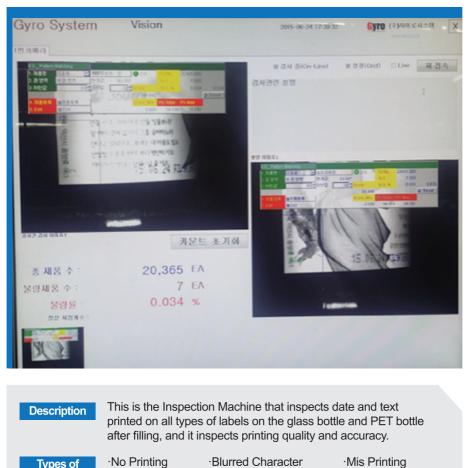
Inspection image

glass bottle

15.03.03 F3 11

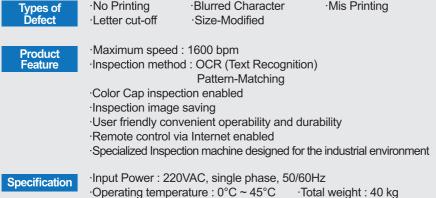
DATE-CODE inspection machine

LABEL GV-500DC - LABEL











DATE-CODE inspection machine

PAPER PACK GV-500DC - PACK



Description

This is the Inspection Machine that inspects date and text printed on the paper pack product after filling, and it inspects printing quality and accuracy.

·Mis Printing



·No Printing·Blurred Character·Letter cut-off·Size-Modified·Maximum speed : 800 bpm

Product Feature

Specification

 Inspection method : OCR (Text Recognition) Pattern-Matching
 Color Cap inspection enabled
 Inspection image saving
 User friendly convenient operability and durability
 Remote control via Internet enabled
 Specialized Inspection machine designed for the industrial environment

·Input Power : 220VAC, single phase, 50/60Hz ·Operating temperature : 0°C ~ 45°C · Total weight : 40 kg

















CARTON BOX

GV-500DC - CARTON

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DATE-CODE inspection machine

<image>



Description	This is the Inspection Machine that inspects date and text printed on all types of Carton Box after packaging, and it inspects printing quality and accuracy.		
Types of	·No Printing	·Blurred Character	·Mis Printing
Defect	·Letter cut-off	·Size-Modified	
Product	 Maximum speed : 400 bpm Inspection method : OCR (Text Recognition)		
Feature	Pattern-Matching Color Cap inspection enabled Inspection image saving User friendly convenient operability and durability Remote control via Internet enabled Specialized Inspection machine designed for the industrial environment		
Specification	·Input Power : 220	/AC, single phase, 50	/60Hz
	·Operating tempera	ature : 0°C ~ 45°C	·Total weight : 40 kg



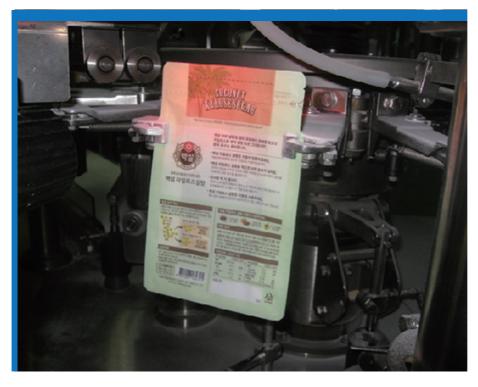


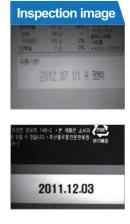




DATE-CODE inspection machine

ROTARY PACKAGING MACHINE GV-500DC - ROTARY







Description	This is the Inspection Machine that inspects date and text printed on the packaging before filling, and it inspects printing quality and accuracy.		
Types of	·No Printing	·Blurred Character	·Mis Printing
Defect	·Letter cut-off	·Size-Modified	
Product	 Maximum speed : 400 bpm Inspection method : OCR (Text Recognition)		
Feature	Pattern-Matching Color Cap inspection enabled Inspection image saving User friendly convenient operability and durability Remote control via Internet enabled Specialized Inspection machine designed for the industrial environment		
Specification	·Input Power : 220	VAC, single phase, 50)/60Hz
	·Operating tempera	ature : 0°C ~ 45°C	·Total weight : 40 kg





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DATE-CODE inspection machine

THREE SIDE PACKAGING MACHINE GV-500DC - THREE







Description	This is the Inspection Machine that inspects date and text printed on the packaging Film before filling, and it inspects printing quality and accuracy.		
Types of	·No Printing	·Blurred Character	·Mis Printing
Defect	·Letter cut-off	·Size-Modified	
Product	 ·Maximum speed : 400 bpm ·Inspection method : OCR (Text Recognition)		
Feature	Pattern-Matching ·Color Cap inspection enabled ·Inspection image saving ·User friendly convenient operability and durability ·Remote control via Internet enabled ·Specialized Inspection machine designed for the industrial environment		
Specification	·Input Power : 220	VAC, single phase, 50)/60Hz
	·Operating tempera	ature : 0°C ~ 45°C	·Total weight : 40 kg



DIFFERENT-CAP inspection machine **GV-500DF - CAP**

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Description

This is the Inspection Machine that inspects type of cap Combined with the container after filling, and it verifies cap design forms and colors of the diverse types.

·Different Cap

Product Feature	

Specification

Types of Defect	·Different Cap
Product Feature	·Maximum speed : 1600 bpm ·Color Cap inspection enabled
	 Inspection image saving User friendly convenient operability and durability Remote control via Internet enabled Specialized Inspection machine designed for the industrial environment

·Input Power : 220VAC, single phase, 50/60Hz •Operating temperature : 0°C ~ 45°C ·Total weight : 70 kg















FILL-LEVEL inspection machine SOV - 500FL





MODELS







Description

This is the Inspection Machine that inspects contents' Fill-Level after filling, and it inspects transparent and semi-transparent containers' Fill-Level.

Types of Defect	·Fill Level
Product Feature	•Maximum •Inspection amount •Inspection •User friend •Remote co •Specialized

Inspection of transparent and semi-transparent containers' filling amount
Inspection image saving
User friendly convenient operability and durability
Remote control via Internet enabled
Specialized Inspection machine designed for the industrial environment

Specification·Input Power : 220VAC, single phase, 50/60Hz·Operating temperature : 0°C ~ 45°C·Total weight : 70 kg

speed : 1600 bpm



LABEL inspection machine **- GV - 500LB**









Description

This is the Inspection Machine that inspects label attachment state after labeling. Composition of diverse method based camera is enabled. (Cameras 1~4)



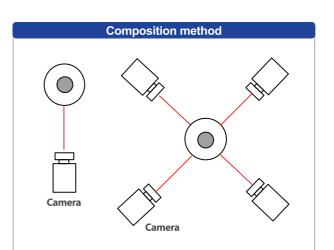
·Label existence ·Label slanting ·Label connection detection ·Different label detection

Product Feature

Maximum speed : 1600 bpm
Diverse lighting methods such as RGB LED lighting, IR lighting and others
Inspection image saving
User friendly convenient operability and durability
Remote control via Internet enabled
Specialized Inspection machine designed for the industrial environment

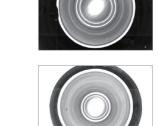
Specification·Input Power : 220VAC, single phase, 50/60Hz
·Operating temperature : 0°C ~ 45°C
·Total weight : 90 kg





EMPTY-CAN inspection machine SOV - 500ECI



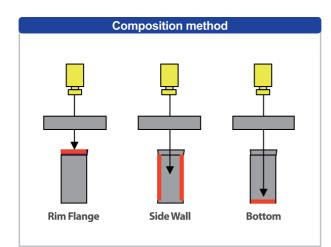


Inspection image

MODELS



Description	This is the Inspection Machine that inspects whether empty can is damaged or not and whether there is foreign objects prior to the filling, and it inspects 2 Piece can, 3 Piece can, round shaped can and square shaped can.		
Types of Defect	·Rim Flange ·Side Wall ·Bottom		
Product Feature	 Maximum speed : 1600 bpm Diverse lighting methods such as RGB LED lighting, IR lighting and others Inspection image saving User friendly convenient operability and durability Remote control via Internet enabled Specialized Inspection machine designed for the industrial environment 		
Specification	·Input Power : 220VAC, single phase, 50/60Hz ·Operating temperature : 0°C ~ 45°C · ·Total weight : 90 kg		





DIFFERENT-PRODUCT inspection machine **GV-500DF - BOX**



Description

This is the Inspection Machine that detects products of different types during each process, and it verifies design forms and colors of the diverse types.

Types of Defect Product Feature

Specification

·Different product

•Maximum speed : 400 bpm •Color Cap inspection enabled •Inspection image saving •User friendly convenient operability and durability •Remote control via Internet enabled •Specialized Inspection machine designed for the industrial environment

·Input Power : 220VAC, single phase, 50/60Hz ·Operating temperature : 0°C ~ 45°C · ·Total weight : 40 kg

















KEG-LEAKAGE inspection machine SV-500LK - KEG











Description

This is the Inspection Machine that detects Liquid leakage after filling.



·liquid leakage

Product Feature Maximum speed : 400 bpm
Inspection image saving
User friendly convenient operability and durability
Remote control via Internet enabled
Specialized Inspection machine designed for the industrial environment

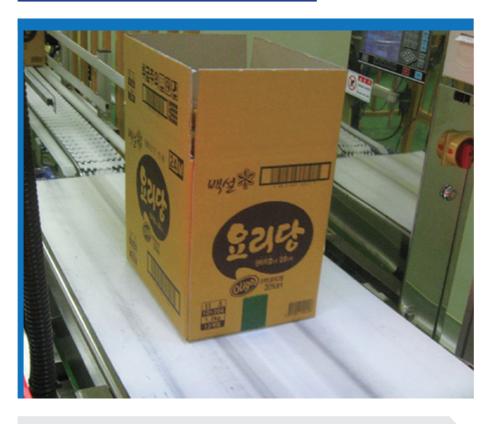
 Specification
 ·Input Power : 220VAC, single phase, 50/60Hz

 ·Operating temperature : 0°C ~ 45°C
 ·Total weight : 60 kg

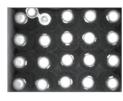
Product supplied to



QUANTITY inspection machine > GV-500CT - BOX











Description

This is the Inspection Machine that detects quantity in the box prior to the final packaging.



·quantity and line-up state in the box

Product Feature

·Maximum speed : 400 bpm ·Inspection image saving ·User friendly convenient operability and durability ·Remote control via Internet enabled ·Specialized Inspection machine designed for the industrial environment

·Input Power : 220VAC, single phase, 50/60Hz Specification •Operating temperature : 0°C ~ 45°C • Total weight : 70 kg

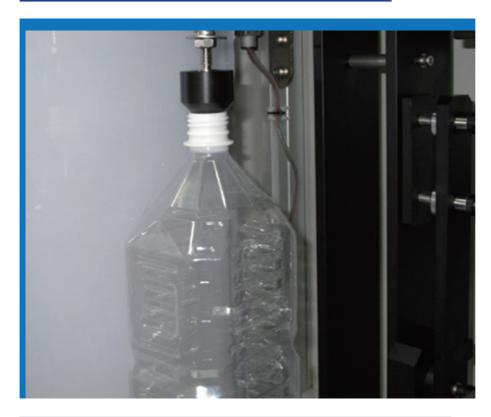








EMPTY-BOTTLE measurement machine SCV-500ME - PET







Description	This is the Inspection Machine that measures product specs after empty bottle Blowing.
Types of Defect	·CAP · BODY
Product Feature	 Maximum speed : low speed Inspection image saving User friendly convenient operability and durability Remote control via Internet enabled Specialized Inspection machine designed for the industrial environment
Specification	·Input Power : 220VAC, single phase, 50/60Hz ·Operating temperature : 0°C ~ 45°C · ·Total weight : 120 kg



Our Customers

GYRO SYSTEM

Nation	Company name	Plant name	Production line	Inspection category
		Incheon Plant 1	1kg of the white color, 3kg of the white color, 1kg of the brown color, 3kg of the brown color, joongsamon area, oligosaccharide, oligosaccharide for kids, can line for large articles and others	Date-Code, cap, label, quantityand others
	O I Ohail Iadaaa	Incheon Plant2	Cooking oil, sesame oil, can, feed and others	Date-Code, cap, label, quantity and others
	CJ CheilJedang	Incheon Plant 3	can line for large articles	Date-Code
		Jincheon Plant	Square tofu, for tofu as well, spam can	Date-Code, seaming
		Busan Plant	Small box	Date-Code
		Gamgok Plant	Sesame oil	Date-Code, label
	CJ Healthcare	Jincheon Plant	Sap	Check existence
		Opo Plant	PET (juice), PET (carbonated drink), small bottle (glass bottle), large bottle (glass bottle), PAK line, can line	Date-Code, cap, label, heterogeneousand others
		Anseong Plant	PET (juice), PET (carbonated drink), can line	Date-Code, cap, label, heterogeneous and others
	Lotte Chilsung Beverage	Daejeon Plant	PET (juice), PET (carbonated drink), NB can line (Cantata coffee)	Date-Code, cap, label, heterogeneous and others
		Yangsan Plant	PET (juice), PET (carbonated drink), PAK line, BB line	Date-Code, cap, label, heterogeneous and others
		Gwangju Plant	PET (juice), PET (carbonated drink)	Date-Code, cap, label, heterogeneous and others
	Lotte Liquor	Gangneung Plant	Large capacity, multi, PET, Soju No. 3 line	Date-Code, barcode, cap, label, level, heterogeneous and others
		Gyeongsan Plant	Soju, Majuang, Seoljungmae and others	Date-Code, barcode, cap, label, level, heterogeneous and others
	Lotte Beer	Chungju Plant	Can, KEG	Date-Code, Leak inspection
		Hongcheon Plant	Can, CRATE (empty box)	Date-Code, heterogeneous box
	Hite Jinro	Jeonju Plant	Can, KEG	Date-Code, Leak inspection
		Iksan Plant	Soju, PET	Date-Code, level, cap
	OB Beer	Icheon Plant	Can	Date-Code
	Dong Suh Food	Jincheon Plant	Can, NB can, Post, Starbucks	Date-Code, cap, barcode
	Korea Yakult	Pyeongtaek Plant	Yakult, Ace	Date-Code
		Yangsan Plant	Yakult, Will	Date-Code
		Eumseong Jeil raw noodle	Ramen	Date-Code
		Eumseong Farm	Vegetable	Date-Code
	Pulmuone	Jeungpyeong Fruit sap	Fruit sap	Date-Code, cap
Korea		Jeungpyeong Spring Water	Drinking water	Сар
		Pocheon Spring Water	Drinking water	Date-Code
	Dong A Pharmaceutical	Cheonnan Plant	Bacchus	Date-Code
	Donga-Otsuka	Chilseo Plant	Can	Date-Code
		Cheongju Plant	PET	Date-Code, cap
	Seoul Milk	Ansan Plant	Dairy product (bottle filling No. 2)	Date-Code
			Drink, bottle line	Date-Code, color inspection
	Namyang F&B	Hongseong Plant	PET (juice), PET (carbonated drink)	Date-Code, cap, heterogeneous
	CH Beverage	Cheongwon	PET	Date-Code, cap
		Yangju Plant	PET	Date-Code, cap
	Our Home	Eumseong Plant	Pork cutlet and others	Date-Code
		Gyaeryong Plant	Tofu	Date-Code
	Gyeongju Beopju	Gyeongju Plant	PET	Cap, level
	Paldo	Eumseong Plant	PET, can	Date-Code, cap, level
	Haitai CALBEE	Munmak Plant	Cookies	Date-Code
	Daesang Red Vinegar	Osan Plant	Red vinegar	Сар
	Hyosung	Gwanghyewon Plant	PET	Сар
	OKF	Andong Plant	PET, NB can	Date-Code, cap
	Woorisool	Gapyeong Plant	Can	ECI (empty caninspection)
	Wooyang Frozen Foods	Cheongsong Plant	PET	Cap inspection
	Dongjin Wine	Buan Plant	Can	ECI (empty can inspection)
	Sineosan Beverage	Gimhae Plant	PET	Date-Code, cap, level
	J.One Drinking Water	Gapyeong Plant	PET	Date-Code, cap, level
	LG Household & Health	Cheongju Plant	Shampoo	Date-Code, cap, level
	Songlim Food	Jincheon Plant	Cooking oil, sesame oil	Date-Code
	Seochang Industrial	Gongju Plant	PET	Cap, level
	Shinwoo S&F	Jeongeup Plant	PET	Сар
	Donghee Corporation	Osan Plant	PET, can	Date-Code
	Doturak	Munmak Plant	PET	Cap
	Bohae	Jangseong Plant	PET	Cap Data Cada
	Seoil	Gimpo Plant	PAK	Date-Code
	Ssangin	Jincheon Plant	Petitzel	Date-Code
	Hyundai Pharm	Cheonnan Plant	Glass bottle	Barcode
	Daesang Farms	Eumseong Plant	Gambrell	Text recognition
	Monte Wine	Tokyo	PET, glass bottle	Date-Code, cap, level, heterogeneous
Japan	Sangaria	Osaka	PET	Date-Code, cap, level, label, heterogeneous, Pin Hole
	Joy Pack	Osaka	PET	EBI empty bottle inspection
	Aodeli Beverage	Zhengzhou	PET PET, glass bottle	Date-Code, cap, level
China	Beijing Huabang Beverage	Beijing	PET	Date-Code, cap, level
Grind	Changbai Beverage	Changbai	PET	Date-Code, cap, level
Philippines	Pepsi Cola	Manila, Muntinlupa	PET PET, glass bottle	Date-Code, cap, level Date-Code, cap, level, heterogeneous
		Yangon	PET	Date-Code, cap, level
Myanmar	Pepsi Cola		·-·	

Products supplied to customer









Food & Beverage Vision Expert Gyro system Co., Ltd.

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