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4000BPH JUICE PRODUCTION LINE



For Our Clients In Libya



(Picture for reference)



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I. About Solution

This quotation is designed for 1L and 1.5L PET bottle .

And the capacity of the all size bottles as below:

No.	Size of the bottle	Maximum Capacity B/H
1	1L	4000
2	1.5L	2600

As to our technology, the whole production line will need parts as below:

1. Water treatment system

Raw water → Raw water tank → Water pump → Quartz sand filter → Active carbon filter → sodium-ion exchanger → Precision filter → RO system → Ozone generator → Pure water tank

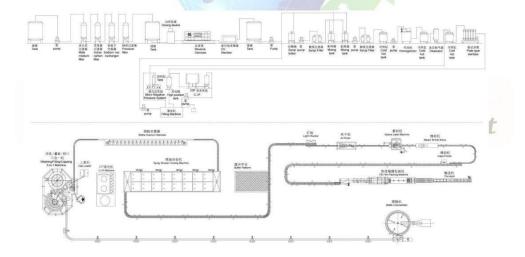
2. Juice preparation system

Sugar melting pot \rightarrow sugar filter \rightarrow Mixing Tank \rightarrow beverage pump \rightarrow Double Filter \rightarrow beverage tank \rightarrow beverage pump \rightarrow Double Filter \rightarrow vacuum deaerator \rightarrow screw pump \rightarrow Ultra high temperature sterilizer \rightarrow Heat preservation tank

3. Filling& Packing system

Air conveyor→ 3 in 1 filling machine→ Light inspection→Belt conveyor→ Air dryer→ Labeling Machine→ Date printer → Packing machine→ Stock

II. Technical process





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III. Quotation

No.	Product name	Remark	Q'ty	Price(USD)
1	Automatic main machine	<i>C</i> it	1set	40.620
2	Auto-loader machine	6 cavity	1set	49,630
3	High pressure compressor	4.8m³/30Bar	1set	11,160
4	Low pressure compressor	2.0m³ /10Bar	1set	1,940
5	Water chiller	5HP	1set	1,940
6	Air cold dryer	4.0m³ /30Bar	1set	1,200
7	Air filter	1.0 m³ /30 Bar	5sets	560
8	Air tank	1.0 m³/30Bar	1set	1,200
9	1L bottle mold	Aluminum 6 cavity,4000- 5000bph	1set	2,770
10	1.5L bottle mold	Aluminum 6 cavity,4000- 5000bph	1set	2,960
	Automatic Bottle Blow	ving System (4000-5000B/H)		73,360
1	Raw water pump	8t/h,SUS304	1set	500
2	Quartz sand filter	8t/h,SUS304	1set	1,860
3	Active carbon filter	8t/h,SUS304	1set	2,020
4	Sodium ion exchanger	8t/h,SUS304	1set	2,180
5	Precision filter	8t/h,SUS304	1set	890
6	Reverse osmosis	5t/h	1set	10,700
7	Ozone sterilizer	30g	1set	1,000
8	Ozone mix device	5t/h,SUS304	1set	1,170
9	Aseptic water tank	5t,SUS304	1set	2,590
10	Pipelines, valves	SUS304	1set	1,940
	Water treatn	nent system (5T/H)		24,850
1	Sugar melting port	2000L,3mm SUS304,three layers with steam	1set	4,300
/Ti	za Compai	heating,stirring,CIP clean head	not S	Expo
2	Syrup filter	2000kg	1set	620
3	Blending tank	4000L,3mm SUS304,three layers with steam heating,stirring,CIP clean head	2sets	12,300
4	Vacuum deaerator	4000L/H	1set	5,200
5	High pressure homogenizer	4t/h	1set	9,700
6	UHT(Plate sterilizer)	4t/h	1set	29,500
7	CIP cleaning system	1T	1set	7,230
8	Beverage pump	4000L	3sets	1,540
	C. 1.	tment system (4T/H)	6	70,390



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Filling and packing system (4000B/H)					
13	Belt conveyor The quantity depends on plant layout			200/m	
12	Air conveyor	52/2		260/m	
11	Automatic packing machine	L type,10bag/min	1set	10,000	
10	Laser date printer	20W	1set	4,400	
9	Automatic stick labeling machine	one label for round bottle	1set	5,850	
8	Bottle cooler		10m	19,500	
7	Blowing dryer	7.5KW,direction adjustable	1set	2,770	
6	Turned-up bottle sterilizer		10m	9,000	
	Reflux tank	1000L,2mm SUS304	1set	1,300	
5	High liquid tank	2000L,2mm SUS304,two layers	1set	3,050	
4	Light Inspection Unit		1set	Free	
	Cap sterilizer system	4000bph	1set	1,850	
3	Automatic cap loader	10000pcs/h	1set		
2	Changing part	for 1500ml	1set	34,300	
1	3 in 1 juice drink filling machine	RCGF24-24-8	1set	34,300	

Remark

- 1. Packing: Export package
- 2. All above price is FOB Shanghai price.
- 3. Payment: 30% by T/T as deposit, 70% T/T before shipment.
- 4. Delivery time: 60 working days after down payment and received your bottle samples.
- 5. Guarantee Period: Three year after date of bill of lading.
- 6. Installation and Commissioning: The seller will dispatch one or two technicians to the buyer's factory for instructing installation and commissioning. The charge for the round-trip air-ticket, foods, accommodation in Buyer's country and pocket money of 100USD for each technician each day will be on Buyer's account.
- 7. Voltage: Single-phase 220V 50HZ, Three-phase 380V 50HZ



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IV. Parameters

1. Bottle blowing machine



Description

SKS-A6 is the fastest liner blow molding machine in mainland of China by now.SKS-A6 reaches around 5700-6000BPH for 330ML bottle. Its baking tunnel is separated from the blow station so that time for mold opening is shortened with a result of speedy blowing and high output, damage to machine is lessened so as to keep reliable performance and prolong service life, as well as machine runs more smoothly and steadily.

It is controlled by PLC. The whole process from preform feeding to bottle discharging is completed automatically with advantages of labor saving and no pollution. HY-A6 consists of three main parts: preform loading system, Heater channel & blow station.

Features

- 1. Machine use of advanced PLC control system, stable in performance, automatic preform feeding
- 2. Strong penetrability and good and swift distribution of the heat by letting the bottles rotate by itself and revolute in the rails simultaneously in the infrared preheater
- 3. High adjustability to enable the preheater to preheat preforms in shapes by adjusting the light tube and the length of the reflecting board in the preheating area, and eternal temperature in the preheater with an automatic thermostatic pparatus.
- 4. High safeties with security automatic-locking apparatus in each mechanical action, which will make the procedures turn into a state of safety in case of a breakdown in certain procedure. No contamination and low noise with the air cylinder to drive the action instead of the oil pump.
- 6. Air route design is divide into two parts...
- 7. Ideal effect of the chilling with the chilling system
- 8. Low rejection rate: less than 0.3percent



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Parameter

	Max Volume	L	2
	Max Neck Diameter	mm	38
	Max Container Diameter	mm	105
Container	Max Container Height	mm	335
	Cavity		6
	Theoretical Output	bph	6000(*)
	Clamping force	KN	600
Electrical	Heating Power	KW	80
	Max Heating Power	KW	120
	Operating Pressure	Mpa	0.8
	Low Pressure Consuming	L/min	1400
Air Compressor	Blowing Pressure	Mpa	3.0
	High Pressure Consuming	L/min	4000-6000(**)
	Pressure	Mpa	0.3-0.5
Chiller	Temperature	$^{\circ}$	10-12
	Flow Rate	L/min	30
Machine	Machine Size	m m	5.2x1.93x2.03
Machine	Machine Weight	Kg	6000

^(**) Depending on bottle size, shape and weight.

Main supplier of components

	Pneumatic parts	
Name	Brand	Origin
Clamping cylinder	Airtac	Taiwan
Bottom die cylinder	Festo	Gemany
Stretching cylinder	Festo Ta	Gemany T
Solenoid valve	Festo	Gemany
Clamping solenioid valve	Ark	Korea
Tensile solenioid valve	Festo	Gemany
One way valve	Parker	U.s.a
Retaining valve	Festo	Gemany
Water separator	Festo	Gemany
	Electrical parts	
PLC	Mitsubishi	Japan
Photoelectric switch	Omron	Japan
Proximity switch	Omron	Japan

^(*) Depending on bottle size and operation conditions.



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Magnetic switch	Festo	Festo
Inverter	Elta	Famous brand in china
Contactor	Schneider	Franch
Rotating motor	Tunglee	Taiwan

More details

Configuration



Blowing part



Clampling system











Material:

Miza company for Import and Export.

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2. Water treatment system

Stainless steel Raw water pump

Flow: 8m³/H Flow length: 40m Power: 3KW

Size: 300*263*767mm

Place of origin: CNP Weight: 50kg



Quartz sand filter

It is used of quartz sand as filter media. Under high pressure, the high turbidity water by quartz sand filtration granular certain thickness or non-grain, effective water retention to remove suspended solids, organic compounds, colloidal particles, microorganisms, chlorine odor and same heave metal ions, and ultimately achieve a high efficiency filtration equipment, reduce the turbidity of water.

Size: 1200*1000*700mm

Thickness: 2mm

Material: SUS304 stainless steel (Food grade)—Made in china.

Pump body stainless steel SUS304

Filter medium: Sand

Specification: φ2mm, φ1mm, φ0.5mm, φ0.2mm (The bigger shall be put downside and the

smaller shall be put upside) Filtering volume: 8m³/h Weight: 1030kg



Active Carbon Filter

Active carton filter adopts hydraulic simulation and with the grain size is reasonable, efficient activated carbon surface area more than 1000 square meters per grams, so that it can remove chlorine, smell, organic matter, colloid, iron and residual chlorine and other outstanding for reducing the water turbidity, chroma, purify water quality.

Size: 1200*1000*700mm

Material: SUS304 stainless steel (Food grade)

Medium: Shuck shape active carbon

Treating volume: 8m³/h Weight: 1030kg





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Precision filter

Usage: It is mainly used to remove the tiny impurity. Open the filter to remove the impurity.

JML-6 Model:

 $\Phi\,500\!\times\!1700\,mm$ Size:

Thickness: 2mm

Material: SUS304 stainless steel (Food grade) Medium: Polypropylene film

Filter precision: Treating volume: $8m^3/h$ Weight: 100kg



RO system

This device is used to remove the germs, the harmful inorganic ion, and organic ion; remove heavy metals and salt; rearrange water structure. It is the ideal equipment to make high standard pure drink water.

First grade ≥5m³/H (25°C),Recycle rate: 65-70% Main design data:

11.55kw Power:

Dimension: 2100×850×1800mm

Weight: 800kg



Ozone generator

It is used for food and beverage industry: workshop, asepsis room, locker room, warehouse and production apparatus disinfection and sterilization, is HACCP standard production, the majority of food plant air purification, sterilization and disinfection of the powerful guarantee.

Power: Total power: Ozone Capacity: 30g

Sterilization area: 800m2



Pure water tank

The pure water tank is made by food grade SUS304 stainless steel plate.It is satisfied of National Health Standards, the main body of the tank won't be dust. No Leakage, No breeding algae, It won't be two time pollution sources.

SUS304 stainless steel (Food grade) Material:

Thickness: 3mm





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Pipe and valves

Stainless steel pipe valve connected with a major role in between each equipment, isolation devices between devices, regulating the flow and prevent the return of the pressure regulation and excretion. It can be used for the control of air, water, steam, all kinds of

corrosive media, mud, oil, liquid metal in various types of fluid flow.



3. Juice pre-treatment system

Sugar melting pot

Sugar melting pot is used to melt sugar into syrup through its electrothermal tube.

Specification: $\Phi 1000 \, H1600 mm$

Capacity: 2000L/H
Power: 1.1KW
Material: SUS 304
Three-layer: Heat by steam



Syrup Filter

Made of SUS304 high-quality stainless steel, it is composed of two cylinders, polished inside and outside, suitable for the purification of solid impurities invisible to the naked eye in juices, sugar liquids and other liquids. The two filters are used interchangeably to replace the filter without stopping the machine and are suitable for continuous production. Filter size 80-300 mesh can be prepared according to user requirements.

Capacity: 2000kg

Specifications: $\phi 450 \times 750 mm$

Material: SUS304 stainless steel

Filtration accuracy: 100-300 mesh

VIIZA COMPANY FOR IMPORT & EXPORT



Blending tank

This mixing tank which is made of SUS304 stainless steel is designed and manufactured strictly according to requirement of Food Sanitation Specification.

It can be suitable for many kinds of media to mix and store. It equips with a high-speed forcible agitator to mix media rapidly.





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Vacuum deaerator

It is mainly composed of barrel, top cover check valve, nozzle, control valve, lighting, sight hole, etc. When using, it only needs to open the matching vacuum pump to pump out the air inside the tank, and the material port is self-priming into the tank. When it is raised to a certain position, the control valve automatically controls the material. At this time, the feed rate can be observed and controlled from the sight glass. When the vacuum in the tank reaches the process requirement, the material can be withdrawn from the material outlet, as long as the vacuum is maintained and the material is fed in and out. The balance can be continuously produced.



High pressure homogenizer

The high pressure homogenizer is a widely used device for homogenization of liquid and material, or formation of high pressure spray. It is widely used in the fields of dairy product, drinks, edible chemical medicine and biological technology. The material and liquid is homogenized under high pressure so as to prevent from or reduce the delamination, increase the pureness and looseness of the material and liquid and improve the quality of mixture.

Flow rate: 4T/h

Maximum pressure: 60MPa

Power: 26KW

Overall dimension: 1850*1650*990

Material:SUS304



UHT(Plate sterilizer)

The factory adopts advanced stainless welding technology from abroad, selecting the fine polished stainless stell tube, which has improved greatly comparing with the former products we manufactured. There are two kinds of specification; manual control and automatic control. It is suitable for the liquid material, such as fresh milk, fruit drink, wine, soybean milk and Chinese medicine, as well as the sticky material (for example, sweat condensed milk) upon completing with high-pressure homogenizer. The information of other automatic UHT completing with aseptic packing machine is ready for you.





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CIP system

Operating pressure:

★ Inside the tank: atmospheric pressure

★ Inside the steam pipe: 0.3~0.7Mpa

Operating temperature:

- ★ Water and alkali tank: 60~80° C
- ★ Inside the acid tank: normal temperature
- ★ Inside the steam pipe: \leq 138.8° C

Material name:

- ★ Acid and lye tank: 1% nitric acid, <2% lye
- ★ Steam pipe: water vapor
- ★ Effective volume of tank: 600L (single tank)
- ★ Container category: atmospheric pressure container
- ★ Every cleaning time: Free
- ★ Washing liquid delivery sequence: Clear water Alkali Water Clear acid Clear water
- ★ Maximum lift of centrifugal pump 24 meters
- ★ Pump: Flow Q=10m3/h Power N=0.37KW
- ★ Heating energy: saturated steam (0.3Mpa)
- ★ Flushing pressure: 2.4kg/cm2
- ★ Washing speed: 2.77m/s
- ★ Dimensions (cleaning device) 2400X1200X1800
- ★ Tank: Ф800
- ★ Weight: 0.8T

4. Filling and packing equipment

3 in 1 filling machine for juice







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Main Part

Washing part: More water saving with the mechanical valve.





Filling part: Downhead cam structure with high speed valve, filling more stable and accurate, no water leakage. Igus plastic bearing to make the machine work more stable and easy maintain. Beverage tank is smooth inside without dark spots.



Capping part: Constant torque rotary cap of krones structure, low noise, damage free and smooth operation. Electroplate shaft, no blackening. The cap part is fully closed.









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Other details

Cap loader



The latest cap loader system, stable working speed and does not jam, contain cap recycling device.

Table-board and painting



Original thickness: 30mm Thickness after levelling: 28mm Covered: 2mm stainless steel Anti-rust sand blast treatment make painting smooth and keep loner time

Lubrication system



Integrated refueling & Automatic fuel pump.

Slewing bearing



Bigger than normal bear, ensure machine operating more stable for long-term.

Rotary stanchion



Transfer the machine gravity from the table to the frame, prolong the service life of the machine.

Bottle transmission



With anti-seize bottle device



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High beverage tank

Capacity: 2 tons

Material: stainless steel 304

Thickness: 3 mm With mixing function



Turned-up bottle sterilizer

- 1. The main motor adopts stepless speed regulating motor, which can easily set the production speed.
- 2. The whole body is made of 304 stainless steel, and the appearance is beautiful and clean.
- 3. The conveying system uses a combination of heat-resistant chain plates and stainless steel chains, and the plate surface is flat and wear is small.
- 4. Install a heat-resistant rubber mat on the wide chain plate to ensure that the bottles are kept at a certain interval during the pouring process and do not roll. Ensure that the bottle runs smoothly.

Capacity:5000bph

Conveyor speed:0-10m/min Sterilize time: ≥25s Power:1.5KW

Size: 8000×550×1400 Weight: 800kg



شبركة ميزة للإستيراد والتصدير

Blowing dryer

The machine is used for drying outside cans. This dryer replaces the brush one which is easy damaged and changed frequently. Air Knife Blowing Dryer avoid cans falling and prevent the cans from ash pollution.

Material:SUS304 Air pump:7.5KW Direction adjustable







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Bottle warmer



- a. Conveyor speed is stepless speed regulation.
- b. All spray pipes are stainless steel and the sprinklers are evenly distributed.
- c. The warming tunnel sump is made of stainless steel and has high and low liquid level control alarm functions.

Capacity: 5000bottles / hour Warming effective area: 8×0.8m2

Conveyor running speed: 0~1.2m/min

Warming time: adjustable, main motor stepless speed regulation

Warming tower circulating water volume: 60m3/h

Automatic sticker labeling machine <u>Introduction</u>

This machine is suitable for round bottle or round container to label control system adopted Siemens Stepper two-axis PLC control, collocation large LCD human interface, it is easily to operate, servo motor control label. This machine is made of SUS304 and aluminum alloy to meet GMP standards.

Labeling speed is synchronized with conveyor speed track, can be used with 650mm diameter turntable automatically into the bottle, optional hot foil printer. Standard score better bottle wheel for roundness and labeling speed is less than 150 of bottles per minute.





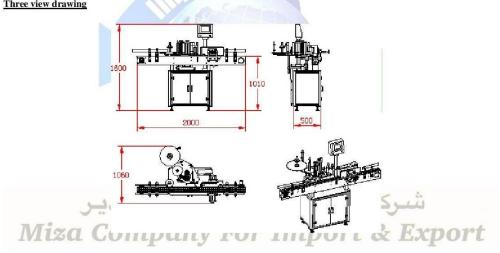
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Separating screw labeling speed per minute for more than 150 bottles or more bottles and standing firm.

Parameter

Label height	A/10-120mm,C/10-180mm,D/10-220mm
Label length	10-300mm
Diameter of bottle body	30-130mm(large size products, conveyor belts can be widened)
Label roll inner diameter	76mm
Label roll outer diameter	≤360mm
speed	12-38 meters/min
electricity consumption	0.7KW-1A

Three view drawing



Configuration

Name	Brand	Place of production
PLC	Siemens	Germany
frequency changer	Siemens	Germany
Servo drive	Siemens	Germany
Touch screen	Siemens	Germany
Sensor	Panasonic	Japan
SMPC	Schneider	France



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A.C.contactor	Schneider	France
DC 24VRelay	Schneider	France

Laser date printer













Parameter

Laser Power	20W	
Wavelength	10.6µm/9.3µm	
Rated Power	≤800W	
Marking Area	70mm*70mm 110mm*110mm 300mm*300mm Optional	ort
Laser Source	DAVI	011 6
Field Lens	CARMAN HAAS	
Galvanometer Scanner	Sino-Glavo scanning head	
Control System Genuine Software	CLEFINE	
Cooling Way	Air cooling	
Min. Character	≥0.4mm	ř
Min. Line Width	≥0.1	
Marking Speed	≤7000mm/s	
Repeated Positioning Precision	0.01mm	
Power Supply	Taiwan MEANWELL power	
	Wavelength Rated Power Marking Area Laser Source Field Lens Galvanometer Scanner Control System Genuine Software Cooling Way Min. Character Min. Line Width Marking Speed Repeated Positioning Precision	Wavelength 10.6μm/9.3μm Rated Power ≤800W Marking Area 70mm*70mm 110mm*110mm*300mm*300mm Optional Laser Source DAVI Field Lens CARMAN HAAS Galvanometer Scanner Sino-Glavo scanning head Control System Genuine Software CLEFINE Cooling Way Air cooling Min. Character ≥0.4mm Min. Line Width ≥0.1 Marking Speed ≤7000mm/s Repeated Positioning Precision 0.01mm



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Language	English/Chinese	
Net Weight	60.4KG	



Automatic PE film pack shrinking machine-L type

Specially designed for packaging production line of beer, beverage, pure water, fruit juice, dairy products, etc. With full automatic functions of bottle transfer and arrange, membrane packing, sealing and cut, shrinkage, cooling and shaping, etc. Using advanced constant temperature membrane heat binding technology in the world with clear and secure seal. The quick seal cooling structure guarantee that the seal has a higher strength even if under high speed production condition. Adopt with PLC automatic

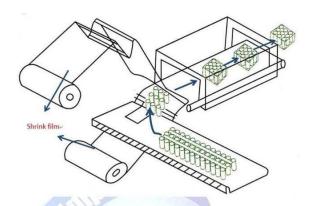


program circulation control with stable and reliable performance. The inductive switch controls the membrane transfer system to reliably adjust and control the membrane transfer length with less loss. All the transfer system is controlled by frequency changing devices. With stable and smooth transfer speed. Unique thermal passage with 2 sets of centrifugal thermal air circulation system that has an equal heat distribution with beautiful and secure shrinkage effect.



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Flow chart

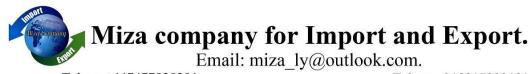


Technical parameters

Dimension for the whole unit	L6500mm*W3200mm*H2100mm
Thermal shrinkage passage dimension	L1800mm*W650mm*H400mm
Max package dimension	L600mm*W400mm*H350mm
Packaging speed	6-8Pcs/minute
Transfer belt width	304mm
Sealing and cutting time/temperature	0.5-1.5s 140°C -160°C
Operating power supply/power	380V 24kw
Operating air pressure	0.6-0.8Mpa

Detail list of Selecting and Using the Accessory

	Name	Model	Amount	Brand	Original	
VI:	Miniature circuit breaker	4P C20	Im	Siemens	Germany	OT
	Miniature circuit breaker	3P C10	1	Siemens	Germany	
	Miniature circuit breaker	2P C10	1	Siemens	Germany	
	A.C.contactor	E1810	1	Siemens	Germany	
	A.C.contactor	E09104	3	Siemens	Germany	
	PLC	SIMATIC S7-200	1	Siemens	Germany	
	Touch screen	SMART 700 IE V3	1	Siemens	Germany	
	Frequency transformer	SINAMICS V20	1	Siemens	Germany	
	Sensor		4	Panasonic	Japan	1



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Conveyor system

PET bottle air conveying line is use of wind power fans to in-feed the empty PET bottles into fillingmachine. Its high efficiency and high speed can meet the high speed filling line. The bottle body damage is very small. Conveyor support is square tube, more stable. And the leg height can be adjust.