



شركة ميزة للاستيراد والتصدير
Miza Company For Import & Export





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HRZ-2000M AUTOMATIC EGG

TRAY PRODUCTION LINE

For our clients in Libya

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Project introduction

Rotary type paper pulp molding machine are the most popular machine model for big production capacity requirement, it has several advantages, like high production efficiency, good dehydration effect etc.

In addition, we equipped multilayers drying system, which can reduce the fuel and power energy consumption, workshop requirement etc.

The whole production line is fully automatic running, which can minimize labor costs.

The specifications of the pulp molding production lines are divided due to different customer preferences, market demands, labor cost, energy cost, field availability and climate in different areas, considering this, our company developed many pulp molding production lines in different specifications to meet the customer's requirements:

HRZ-2000M, HRZ-3000M, HRZ-4000M, HRZ-6000M, HRZ-8000M.

The above mentioned production lines are suitable for the following products: Egg tray(30-packed, 20-packed etc.), egg box/carton(4-packed, 6-packed, 10-packed,12-packed, 6+6-packed,15-packed,18-packed and etc.), fruit tray(for apple, tomato, pear and etc.), cup carrier(4 packed and 2 packed), some medical-care products and fixed shape(the design doesn't change frequently) pulp molding products with large quantity.

HRZ-2000M rotary type automatic paper pulp molding production line system basic constitution
The HRZ-2000M rotary type automatic paper pulp molding production line constituted by five large-scale systems:

- (1) Pulping system
- (2) Forming machine
- (3) Drying system
- (4) Finished products automatic stacking, collection and manual packing system
- (5) Electricity control system

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2. Configuration List

A. Pulping system

1) Hydrapulper



- Nominal volume: 2m³, equipped with auto feeder and paper weighing bin;
- Breaking the waste paper by stirring knife, and then the initial mixing of waste paper and water, obtain the original pulp;
- Stainless steel sieve plate and impeller knife;
- Vertical type, 24 hours uninterrupted for supplying pulp.

2) Pulp vibrating screen



- Preliminary screening the pulp through the frequency vibration, filter out impurities from pulp;
- Sieve plate (304# stainless steel) area: 1m².

3) Pulp pool agitator



- Mixing the pulp in the pulp pool or tank, and keep the concentration of the pulp steady;
- The mixing arms are controlled by gear motor.

4) Sewage pump



- QW model submersible sewage pump;
- Two of them are used for transferring the pulp from pulp pools to forming machine, another one is used for supply water to hydrapulper and pulp pools;
- The rest one is used for transfer original pulp to pulp supply pools.

5) Pulp refiner



- ZLC model multiple performance high efficiency milling pulp desanding machine;
- Function: Broken pulp fiber and remove impurities furtherly.



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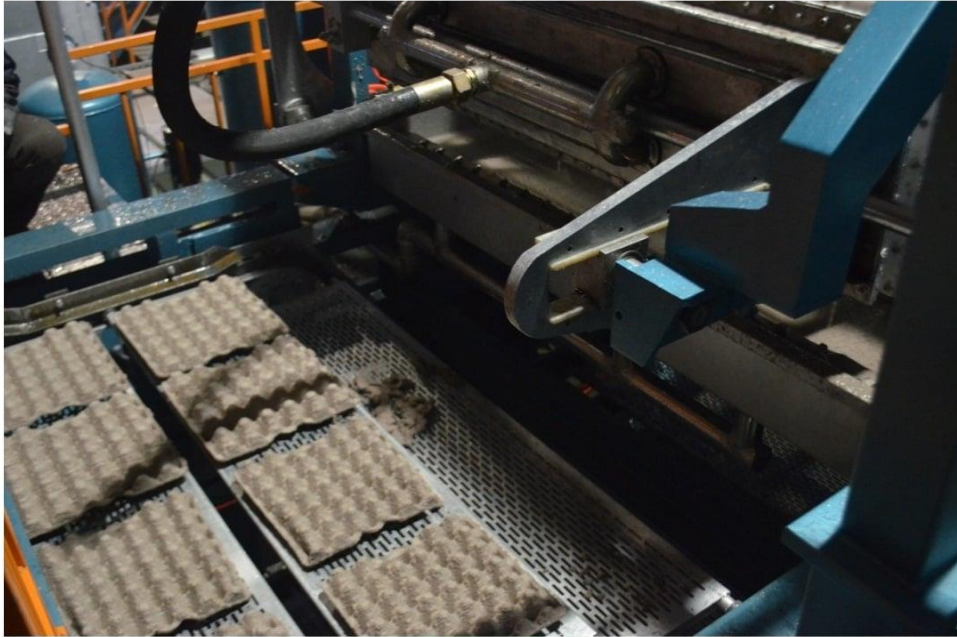
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B. Forming system

1) Automatic forming machine



- Production capacity for 30 packed egg tray: 2000pcs per hour.
- Motor Power: 11kw, - controlled by frequency converter.
- Rotary type design, there are four of molds face-plate totally, which can increase the dehydration effect, and we are using CNC production technology, increasing forming accuracy effectively.
- Each mold face contains 3 pieces of egg tray mold, separated fixed, easier to maintain.
- Products can be outputted and delivered into the dryer automatically.
- Electronic eyes monitor the entire process and centrally manage the production.
- The transfer mold plates are using double driving arms design, which can increase forming speed and accuracy.
- Pneumatic ball valve control the pulp suction process, which can keep the weight of egg trays constant
- Brake and driven by PRECISE INDEXING DRIVES, making the machine more stable.
- With auto mold washing and edge washing system.
- **All the parts connected with water are made of 304# stainless steel.**



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2) Mold



- For 30 packed egg tray: 12pieces
- CNC production engineering, aluminum alloy
- Stainless steel mold nets



- For 30 packed egg tray: 3pieces
- CNC production engineering, aluminum alloy

1) Air compressor unit



- Used for supplying air pressure for transfer mold plate and palletizing machine;
- Exhaust capacity: 3.5 m³/min;
- Including one set of air pressure tank.

2) High pressure washing unit



- Used for mold washing and edge washing;
- Pump Material: stainless steel;
- Include vertical centrifugal pump, control valves, vacuum tank, high pressure nozzle and other parts.

3) Moisture separation system



- Control the vacuum air / water separation and water drain/recycle automatically
- Include self-priming pump, control valves, and other parts.

4) Vacuum pump



- 2BEA model water-ring vacuum pump
- Manufacturing vacuum state in forming molds, in order to suck pulp and form egg trays

5) Recycle pump



- ISW model horizontal centrifugal pump
- Used for recycling the extra pulp



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C. Drying system



1) Drying line

- Multi-layer design: 6 layers
- Thickness of insulation board: 120mm
- Width: 1600mm, length: 14000mm, this size can be adjusted according to customer's workshop.
- Heating method: center heating by gas or diesel etc.
- Recycle Blower: 8# medium-press fan with motor
- Wet air emission blower: 3.2# medium-press fan with motor
- With furnace and automatic burner: 7000000 kilocalorie capacity
- Working temperature: 180~220 °C
- Drying capacity: 550kg/h
- Conveyor speed: Synchronized with forming machine rotating.

2) Burner

- With furnace and automatic burner: 7000000 kilocalorie capacity;
- RIELLO brand, progressive two-stage operation
- Fuel choice: 0# Diesel, Natural gas, LNG, LPG etc.



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D. Collection system

1) Palletizing machine



- Stacking the egg tray automatically;
- Include auto counter system;
- PLC program and cylinder control;
- Automatic control, which can save labor costs effectively.

2) Pneumatic compaction machine



- For compressing the egg tray, in order to save transportation space
- Cylinder and foot switch control

E. Electrical control system

1) Electric cabinet

- Totally three electric cabinets, separately control pulping system, forming system, and drying & collection system;
- Including frequency converter, temperature controller, control button, contactor and relay etc. electrical components.

2) Operation unit

- Including one operation box which fixed in forming machine chassis, control the whole system by knobs and buttons
- Including air switch control button, contactor and relay etc. electrical components.
- If customer have customized requirement, this operation box can also use PLC program and touch screen technology.

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3. Power installation list

No.	Item	Motor Power (KW)	Quantity	Total Power (KW)
1.	Vertical Hydrapulper	30	1set	30
2.	Auto feeder	2.2	1set	2.2
3.	Pulp vibrating screen	3	1set	3
4.	Pulp pool agitator	3	3sets	9
5.	Sewage pump	2.2	3sets	6.6
6.		3	1set	3
7.	Pulp refiner	7.5	1set	7.5
8.	Automatic forming machine	11	1set	11
9.	Air compressor	22	1set	22
10.	Vertical centrifugal pump	2.2	1set	2.2
11.	Self-priming pump	3	1set	3
12.	Vacuum pump	37	1set	37
13.	Recycle pump	3	1set	3
14.	Burner	1.1	1set	1.1
15.	Recycle Blower	18.5	1set	18.5
16.	Wet air emission fan	2.2	1set	2.2
17.	Egg tray stacker	0.75	1set	0.75
Total Rated Power				<u>162.05KW</u>
Transformer capacity				<u>200KVA</u>



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4. Production line overall technical data

Item	Information
Throughput	Each hour: normally is 2000 pieces of standard 30-packed egg tray. If buy all hot-press machines and egg carton molds could for 2000 pieces of bring lid eggs carton (10, 12, 15, 18, 6+6, 9+9 type), or 1500 pieces 400X300 fruit tray. (Note: 6+6, 9+9 eggs carton mean 6, 9 eggs carton 2 pieces in one mold)
Workshop recommendation	Total $\geq 480m^2$: Length $\geq 32m$; Width $\geq 15m$; Height $\geq 6m$; (It could be adjusted according to the user's existing workshop)
Type of Material	Waste paper: newspaper, carton paper, cardboard, corrugated paper, books, etc.
Material consumption	120~160kg/h : Including impurities 30 packed egg tray(60~90g)
Water consumption	270~350kg/h : Vaporized in drying process 30 packed egg tray(60~90g)
Electricity consumption	70~80kWh/h : 24 hours none-stop (Full throttle operation)
Fuel consumption (approximately)	LPG 27~40 kg/h (10847 Kcal/kg) Natural gas 35~50 m ³ /h (8500 Kcal/m ³) or LNG 26~37 kg/h (11305 Kcal/kg) Diesel 35~50 l/h (8534.5 Kcal/l) (Choose one from the three types of fuel)
Operator Required	4~6 people/shift: 1~2 for pulp making, 1~2 for operation and 2 for collection (24hours, 3shift)
Transport requirement	4 of 40'HC : Standard ocean shipping container (Whole production line overall equipment and components)
The flowing items must be prepared by the buyers before installation :	
Workshop, installation foundation of the machine(if necessary), drain ditch in the workshop, hot air circulation ditch etc.	
Pulp making system: Including pools or tanks for pulp making system, all the connection pipes、 valves and faucet, the platform or pit of hydrapulper (if necessary)	
Power supply system: Transformer, cables, junction box and air switch etc.	
Water supply and storage, raw material supply and storage, enough labors (at least 4 workers) for installation and test running.	
Fuel supply (Diesel, Natural gas, LPG etc.). Including storage and supply system(including store tank, pressurization & gasification equipment, supply pipe & valves before connect to the burners)	



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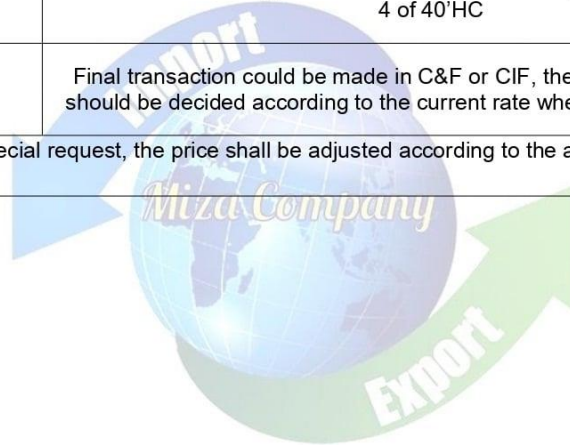
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1) Quotations :

All equipment and molds in list of supplied by seller:

<u>Item</u>	<u>Standard Configuration (380V/50Hz) :</u>
Production Line Price	FOB QINGDAO: USD 126,000.00
Sea Freight	According with the real-time price of shipment date. 4 of 40'HC
Total price	Final transaction could be made in C&F or CIF, the freight and insurance should be decided according to the current rate when signing the contract.

If there is any special request, the price shall be adjusted according to the actual situation.



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6) Installing Terms:

1. To offer technical documents:
 - a. Layout drawings of production line.
 - b. Construction foundation drawings for production line.
 - c. Operation manual.
 - d. Technology formula.
2. Technical assistance:
 - a. Direct and monitor the installation process.
 - b. Supervision of testing and commissioning.
3. Training (option of a or b, or both of them are adopted)
 - a. The Buyer sends personnel to the seller's plant for training.
 - b. Normal training: installation engineers will teach workers during installation and commissioning in buyer's plant, buyer should selected the workers who will keep staying in buyer's plant for at least 6 months to take the training curriculum.

Note:

- a. It will take about 30 days for installation, testing and commissioning, normal training, etc. for each production line, but the plant building, foundation, water, electric power, fuel supply, etc. shall be prepared by the buyer in advance before installation.
- b. The quotation does not include the following items:
 - (1) The building of the plant.
 - (2) The construction foundation of the equipment.
 - (3) The first power cable and transformer.
 - (4) The charges related to installation engineers.
 - (5) Ocean freight, unloading charges, insurance and any taxes.
- c. The seller shall send engineers to the buyer's contract plant site for the direction of installation, testing and commissioning, training of operation.
 - (1) Buyer shall pay salary to seller's engineers when they are in buyer's country.
 - (2) The seller's technical personnel shall not work more than 8 hours per day.
 - (3) The hotel or home, meals of the seller's engineer, travel cost, and other cost inside buyer's country shall be at the buyer's charge.
 - (4) The VISA cost and airline round-trip tickets from Yantai to buyer's country at the buyer's charge.
 - (5) Installation and training of all time shall not exceed 30days. If the reason of delay is caused by buyer, buyer should pay for the extra salary by cash.

4. The buyer's obligation

- (1) The Buyer shall supply tools, materials or equipment and 4-6 workers (they should be an electrician, an machine erector, an electric welder and an plumber), for completion of the installation and test at his own expense.
- (2) The Buyer shall offer other convenience and assistance necessary for the completion of erection and test.
- (3) The seller shall cooperate with the buyer handle visa actively provide all the material needed



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for visa. If the buyer or government visa problems caused, installed cycle impact not as the responsibility of the seller

(4) The buyer shall ensure that the engineer from seller all the safety problems and domestic during the installation. Suggestion: INSURANCE.

7) Warranty Terms:

A. Warranty period: five years after installation

The sellers guarantee that the mechanical equipment supplied to the buyer is the equipment of good quality. if the equipment is confirmed troubled or damaged under normal operation (8 hours/3 shift day), the Seller shall be responsible to repair and replace the damaged parts or equipment with new ones free of charge.

During the warranty period, if there are some problems with the machinery, the company will be in after received customer's notice, by the specialist is responsible for the customer to solve the problem (by phone, E-mail, fax, etc.).

B. Key service part:

Full set five years spare part is free, it will be cheap to buy after 6-7 years spare part, seller have special service depot, have full spare parts, any time, seller supply the spare parts to customer factory by DHL will not more than 5-7 days, but normally, seller's machine have not happened the state of emergency of the spare parts.

C. Disclaimer:

However, the above warranty is not suitable to the troubles occurred by the following factors :

1. From improper operation, negligence, wrong operation, intended damage by the operator, or abnormal instability of voltage.
2. Due to Force Majeure, such as natural disaster, war, riot, civil strife, strike, fire, etc.
3. Due to natural damage or corrosion of the mechanical equipment.
4. The buyer refits and removes the equipment to a new plant site by himself without the seller's confirmation in advance and without the supervision of the seller's engineers.

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