

FIBRE PULP EGG TRAY PRODUCTION LINE

PAPER & CELLULOSE RECYCLING SOLUTIONS

Advantages of recycled waste paper (fibre) packaging:

Biodegradability - the material can be recycled and completely decomposes in natural conditions without additional costs;

Durability – products made from molded paper fibers are highly durable;

Environmentally friendly - recycled paper and safe additives are used for production;

Competitiveness – the cost of eco-packaging is comparable to analogues made from foamed polystyrene and plastic.

Samples of products that can be produced on this production line:



Egg trays of different sizes and shapes



Cup carriers (HORECA)



Fruit retail packaging



Berry punnets



Electrical part packaging



Bottle transport tray

Capacity: 3600pcs/h (the capacity is calculated for 30 cell egg tray)

Terms of delivery: ExWorks

Time of manufacture: approx. 4 months

Installation and comissioning time: approx. 1 month

Type of molding machine: rotary.

Raw materials: waste paper, chemical additives.

Energy resources: natural gas / steam / solid fuel (customer's choice), electricity, water.

Raw materials and Energy consumption (the calculation is made for 30 cell egg tray, weight 65g)

Capacity per hour, pcs	3600
Capacity per day (22 working hours), pcs	79000
Capacity per month (25 working hours), pcs	1975000
Weight, g	65
Waste paper consumption per hour	234
Waste paper consumption per day (22 hours)	5148
Waste paper consumption per month (25 days)	128700
Electricity per hour, kW	65
Electricity per day (22 working hours) kW	1430
Electricity per day (25 working days) kW	35750
Gas consumption, hour, m3	60
Gas consumption, per day, m3	1320
Gas consumption, month, m3	33000
Number of workers	
Pulp making	1
Moulding machine	1
Ready products collection	2
Pelletising and storage house	1

Chemical additives recipe will be included in the technological documents.

Main equipment of Egg Tray Production Line

No	Description of equipment	Model	Specification	Power, kW	Q-ty, unit of measure
1	Hydraulic pulper	HP-3-55	3m3	55	1 set
2	Pulp screen machine	PMM-2.0	1.8m2	4	1 set
3	Conveyor		4m/m	5	1 set
4	Scales	PW1010-1			1 set
5	Deflaker	D-15	16/24t/d	15	1 set
6	Pulp pump	PP-4-125	60m3/h	7,5 x5	5 sets
7	Water pump	PW-4-125	50m3/h	7.5	2set
8	Pulp impeller	PI	1200mm	4x4	4 sets
9	Water feeding tank	TANK1	2,5m3	-----	1 set

10	Control panel	C1	-----	-----	1 set
11	Rotary type molding chine with 1 set of moulds	SD-3600	-----	5,5	1 set
12	Vacuum pump	2BE253-55	40.8m3/min	55	1 set
13	Air compressor	AT30A	5m3/min	30	1 set
14	Vacuum tank	2.0m3	2.0m3	-----	1 set
15	Air storage tank	2.0m3	2.0m3 (m3)	-----	1 set
16	Multilayer drying tunnel			-----	1 set
17	Burning chamber				1 set
18	Gas burner	RS 130 Riello	RS 130	4	1 set
19	Hot air blower	1450r/min	1450r/min	37	1 set
20	Fan	Y5-48-3		3x3	3 sets
21	Control panel	C2	-----	-----	1 set
22	Pulp concentration gauge unit	LDC-010	1%	-----	1 set

For some of the products such as 6 cells, 10 cells, 12 cells egg cartons, fruit trays and berry punnets we need to use hot presses to make the surface two side smooth.

Products Conveyor line	Used to transfer the after-drying products, assort the product to corresponding tunnels, due sequence and right positions before hot-pressing.Power:4.4kW	1 set
Automatic Hot- pressing Machine	1.Drive by Motor and reducer, Power: 15KW, 2.Pressure:20T, Heating-Power:25KW, 3.Drive motor:2 sets,power:0.5kw 4.2 egg carton/time, which including the spray and get damp organization before hot-pressing.	1 set
Control System	Using the PLC to control products conveyor/hot- pressing/stacker with failure warning function.	1 set

Retail egg packaging (6 cells, 10 cells, 12 cells) need to be produced with labels.

Labeling machine (1 set)



Cold water-soluble glue is used in the production process. A more detailed selection of glue is made by specialists of the equipment supplier according to the market offer in the region where the equipment is installed. The label must be made on paper with a density of at least 90 g / m².

Advantages:

- adhesive base – cold or hot water-soluble glue,
- conveyor with a set of forms for fixing blanks,
- automatic feeding of blanks (packs of 50 pcs), labeling and collecting finished products into packs.
- control unit with touch screen, software in Russian,
- servo motor
- productivity 60-70 pcs/min (one working drum, totally 4 working drums)

Parameters:

Overall dimensions: 5500mm*2500mm*1800mm

Weight: 3t

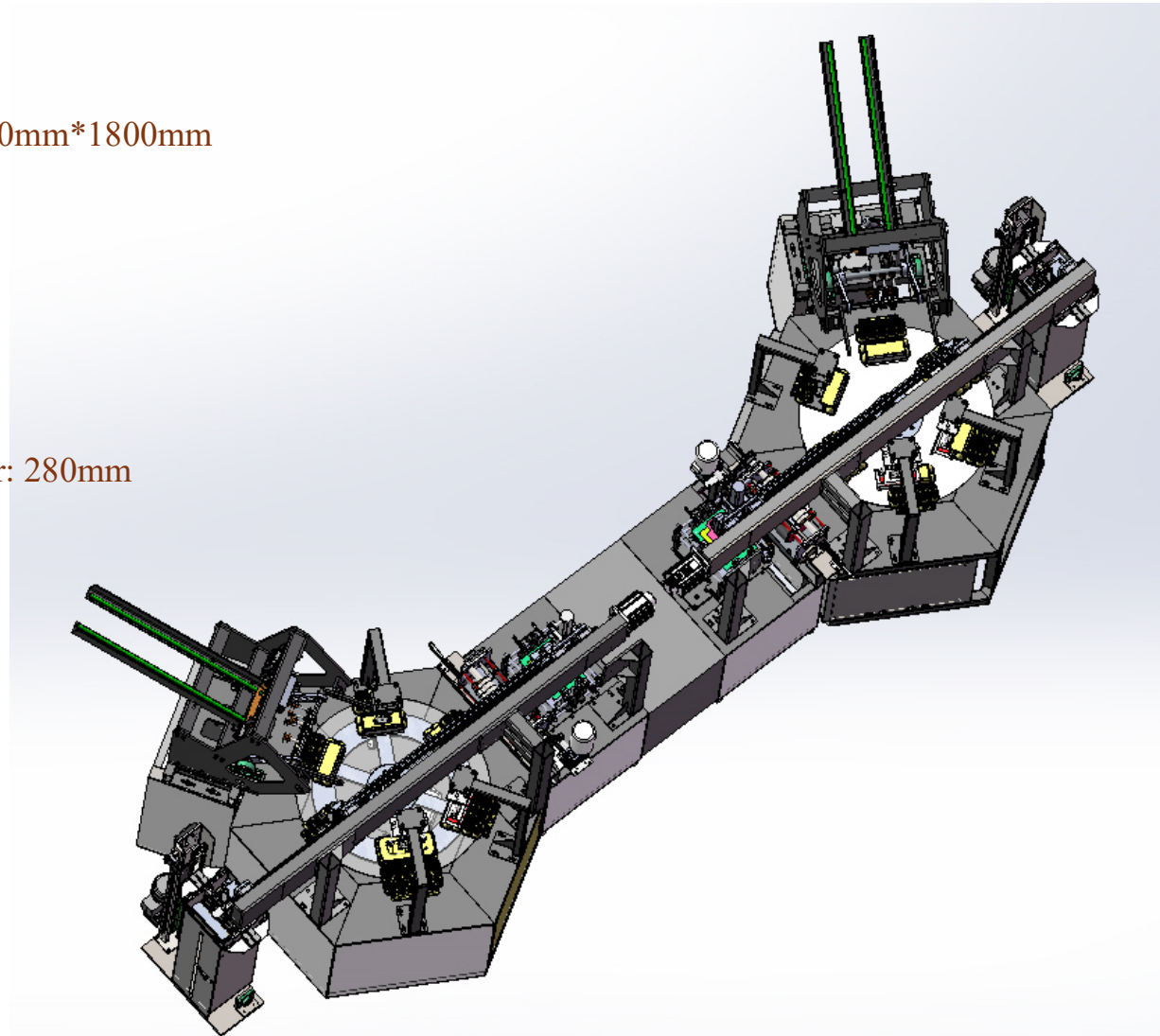
Power: 18kW

Productivity: 50-60pcs/min

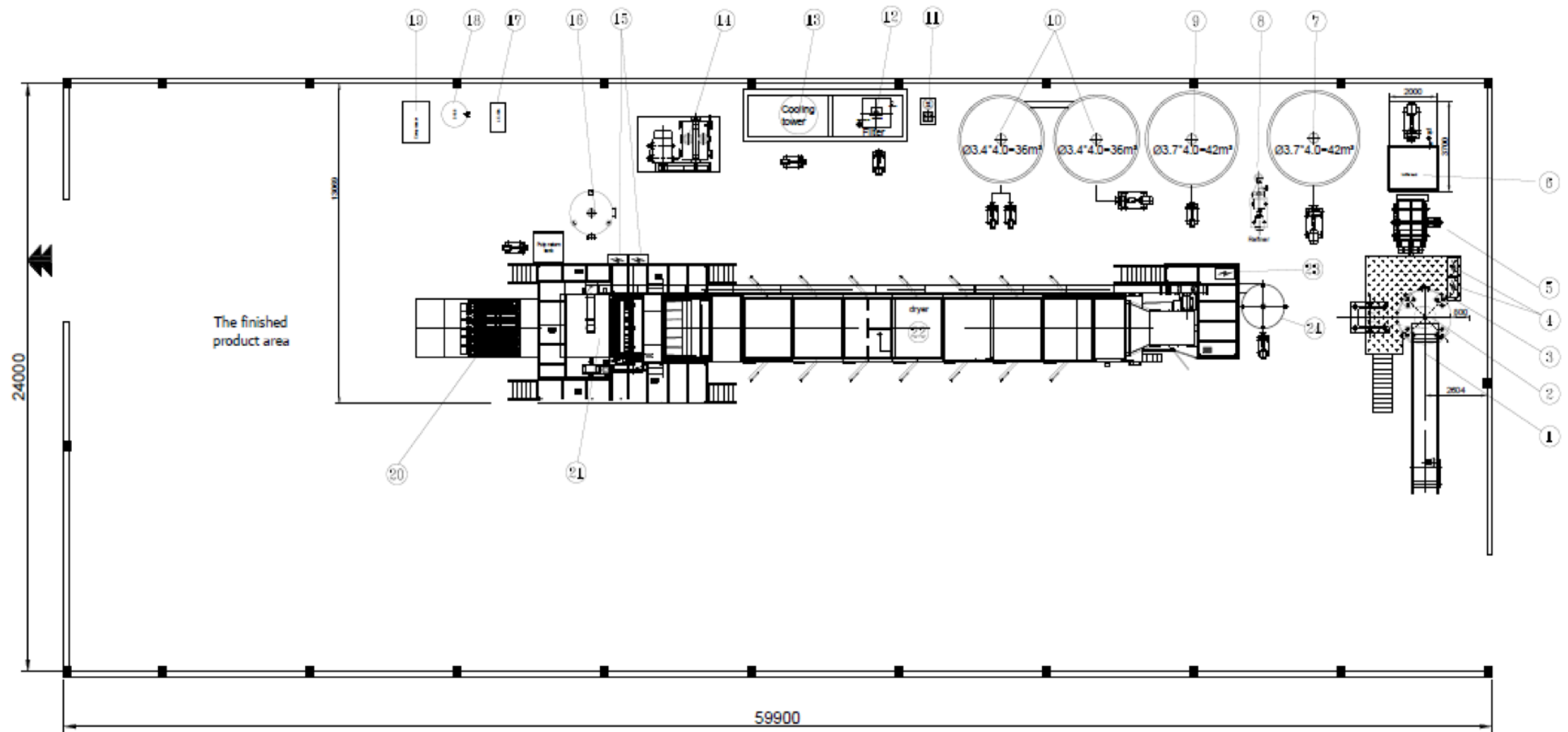
Label size: 270*200mm

Width of the glue application roller: 280mm

Product size:: 340×300mm



The equipment installation layout:



Comments for the equipment installation:

- this is standard main equipment installation layout without raw material and ready products storage spaces.
- Raw material and ready products storage warehouses will be designed on the base of the land plot and placement of infrastructure and roads around the building
- The main equipment layout will be made on the base of the information of land plot, soil structure, gas, water and electricity points.

To install the equipment, the buyer must perform the following preparatory work in the premises:

1. Make connections for water, gas / steam /, electricity according to the instructions of the seller.
2. Manufacture and install containers for water and pulp according to the seller's drawings (possible options: metal, reinforced concrete, plastic).
3. Provide 5 auxiliary workers to carry out installation, commissioning and commissioning work.
4. Prepare building materials and tools according to the seller's requirements.
5. Ensure the availability of a crane, welding machines, and gas cutting.

Complete set of design documents provided during the project fulfillment:

- Equipment layout with reference to the existing warehouse. If the customer is planning to build a new warehouse we will provide layouts and demands for the building design.
- Electricity and gas project in accordance with EU standards.
- Drawings of the basements with detailed specifications.
- Water, pump circulation drawings with detailed specifications.
- Recipe and technology manual
- All machines technical datas and manuals.

Price proposition:

1. Main production line: 352 000,00 EUR
2. Automatic hot press system 315 000,00 EUR
3. Labeling machine 275 000,00 EUR

6 semi-automatic hot presses can be used instead of Automatic hot press system. The price of one semi-automatic press is 6900,00 EUR. The main disadvantage in using semi-automatic presses is that every press needs one worker, totally 6 workers will be added in the staff per shift.