

105-120 PS Food box/tray production line



[Quotation](#)

ITEM	EQUIPMENT NAME	QTY
1.	DYPSP-105/120 model PS Foam Sheet Extrusion Line Make PS foam sheet, capacity: 180-240kg/h	1 set
2.	DY-1040 Fully-automatic Forming and cutting Machine (including one full set mould: forming, cutting and stacking) Form PS foam rolls to different foam box/container/tray/plate /bowl etc by changing the moulds Forming area: 1000x1100mm, speed: 3-5s/stroke	1 set
3.	DY 180+120/100 Double Screws Granule Maker recycle waste to granules for making PS foam rolls capacity: 80-130kg/hr	1 set
4	Booster pump (increase butane pressure, then inject to butane pump)	1 set
5.	Air compressor (5m ³ 30kw Air Compressor)	1 set
6.	Chiller 15HP	1 set
7	Gas Tank (LPG/Butane)	1 set



Delivery:	FOB Qingdao port
Origin:	P.R. China
Package:	Export Standard Packing.
Delivery time:	Within 60 working days after receipt of the down payment.
Payment:	After signing sales contract, T/T 30% down payment in 7 working days, the balance 70% paid by T/T before shipment after test run in the seller's factory.
Shipment:	1x40'HQ+2x40'GP containers for shipping.
Installation:	1 engineer will go to buyer's factory for the test run of whole line and the buyer should undertake whole food/ place and round tickets (airplane and car and so on) and visa fee .The test run period should be finished in 20 days. About the hotel (no requirements about star), it should be near workshop. About airplane, it is better Air China and economic class. Engineer salary is \$100 per day.
Warranty:	The main parts of production line are one year guarantee of quality, The electricity parts and easily damaged parts are 6 months guarantee of quality.
Validity:	30 days
Power supplier:	All Motors and electric parts are at current 3 phase 4 line 380V 50HZ + Ground. If any changes need, the buyer should take charge all the surcharges.
workshop area :	At least 500m2 for three machines, more space, need for storage, so it is better 500-1000m2

GENERAL INFORMATION:

Raw material:	PS granule, talc, butane and so on.
Finished products:	Ps foam fast food box, foam tray, pizza box, egg tray, and so on. Depending on changing molds.
Sheet thickness:	1-5mm
Sheet width:	640-1200mm
Capacity:	180-240kgs/h
Operator:	6-8 workers
Water consumption:	300kgs/24hrs
Cooling water tower:	20 T/ h

Electricity consumption:	3600kw-4000KW/24hrs
Butane gas consumption:	50-80kgs/one ton materials
Air compressor :	1.5 m ³ /min
Installation power:	410Kw

Raw material list:

Item	Name	Specification	consumption
1	GPPS (polystyrene)	melt index 3	
2	Talcum powder	1250 mesh	8-12kg for 1ton GPPS
3	Liquid butane (foaming agent)	Purity more than 90%	80-100kg for 1ton GPPS

DYPSP-105/120 PSP Foam Sheet Extrusion Line



Product introduction:

This production line adopts double-screw foam sheet extrusion technology . PSP foam sheet is a kind of new-type packing material with the features of heat preservation,safety, sanitation and good plasticity. It's mainly used to make various types of food containers, such as lunch box, dinner trays, bowls etc by thermal forming. It's also can be used to make advertisement board, industrial products packing and so on. It has stable performance, big capacity, high automation and yields quality products.

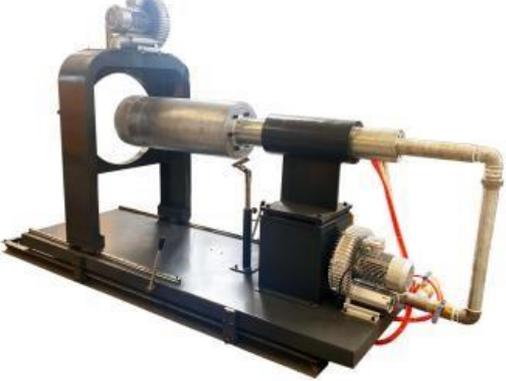
1. Including main parts as the following:

No.	Name	Picture	Detailed technical information	Pc
A	Automatic feeding unit		Auto feeding unit 1set Feeding capacity: 350-450 kg/hr Feeding method: Auto feeding Hopper: conical CE standard Driving motor: 1 set power: 0.75KW	1 set
	Feeder table (CE standard)			

B	<p>Talcum powder injection unit (Italy technology)</p>		<p>Feeding capacity: 0-4.5kg/h Feeding method: Sprial and constantly Driving motor : 0.25KW×2 Talcum powder injection unit adopts Italy technology. Double screw substitute single screw, Solve the poor mobility features of talc powder. The motor is controlled by inverter to make talcum powder injection accurate and stable.</p>	1 set
C	<p>Φ105 Extruder</p>		<p>1) The screw and barrel Screw diameter: 105mm Screw and the barrel material: 38CrMoAlA with nitrogen and alloy spraying treatment L/D: 34:1 Motor power: AC 55kw (motor controlled by inverter) Heating zones: 6 pcs Heating voltage: 380V The barrel is heated by casting aluminum heating rings with protective cover.</p> <p>2) Gear box Model: hard tooth-surface 280 Material: FCD25 malleable cast iron Gear wheel: SCM4 special gear wheel burnishing and heat dealing.</p>	1 set

D	Φ120Extruder		<p>1) The screw and barrel</p> <p>Screw diameter: 120mm</p> <p>Screw and barrel material: 38CRMOALA with nitrogen and alloy spraying treatment</p> <p>L/D: 36:1</p> <p>Motor power: AC55kw (motor controlled by inverter)</p> <p>Heating zones: 7 pcs</p> <p>Heating voltage: 380V</p> <p>Main motor drives gear box. Cooled by inner recycled water, good cooling effect, temperature will be lowed down very fast. Sealing device between 1st and 2nd screw is our patent, its very good for the sealing, material will not leak.</p> <p>2) Gear box</p> <p>Model: hard tooth-surface 280</p> <p>Material: FCD25 malleable cast iron</p> <p>Gear wheel: SCM4 special gear wheel burnishing and heat dealing</p>	1 set

E	Screen changer		<p>Bypass converting screen changer, material pressure is filtered equally when screen is changed, no stop, no sheet broken, no wasted material.</p> <p>Heating zones: 1 pc</p>	1 set
F	Die head		<p>1) The mould is nitrogen treatment to ensure wear resistant. The die mouth material is carbon steel. There are 10 adjustable screws on the outer mould to adjust the gap of die lip. The flange material is steel 45#.</p> <p>2) The temperature is tested in the 1 zone by thermocouple.</p> <p>Install temperature indicator on die head to show die head temperature to be convenient for checking. Besides, there is fuse pressure gauge to show die head pressure to adjust high quality sheet.</p> <p>3) Air ring in front of die head blow compressed air to foam sheet, make</p> <p>4) the foam surface smooth and glossy.</p>	1 set

G	High pressure metering pump		<p>(1) The high pressure pump is manufactured in China with good quality, famous brand, German technology</p> <p>(flow volume: 63L/H, and the highest vented pressure: 40Mpa.)</p> <p>(2) Injecting valve core material is stainless steel.</p> <p>(3) Pump base is weld by profile steel</p>	1 set
H	Shaping, cutting and cooling unit		<p>(1) Consist of bracket and barrel</p> <p>(2) Barrel: cast aluminum, smooth surface and good concentricity, inner cycle water cooling, good cooling and little distortion.</p> <p>Barrel core with wind cooling device cooled product inner surface.</p> <p>Meanwhile blow up foamed product and shape good product.</p> <p>There is one slitting cutter under the barrel.</p>	1 set
I	Haul-off unit		<p>(1) Pressing roller goes up and down quickly, controlled by inverter, speed adjustment accurately, haul off smoothly.</p> <p>(2) Haul off roller material: rubber, Wearable</p> <p>Up pressing roller specification: ϕ 100mmX1250mm 1 pc</p> <p>Main driving roller specification: ϕ 320mmX1250mm 2pcs</p> <p>(3) The haul off roller driving adopts motor and gear box direct connection . Can ensure two rollers working at the same speed. RV90X2</p> <p>(4) Equip with meter counter. Length can be freely set as needed. After</p>	1 set

			<p>reaching the set length, meter counter will give signal. The red signal of haul off machine sparkles. Meter counter start to work again</p> <p>(5) Equipped with an ion fan, installed at the exit of haul off foam sheet, ion wind blow on the surface of foam sheet, eliminating the statics caused during foam sheet production, to avoid static spark.</p> <p>(6) Expanding roller material: stainless steel size: ϕ 75x1250mm 1pc ϕ 115x1250mm 1pc</p>	
J	Double position winder		<p>(1) Driving power of winder is torque motor. Use torque controller to regulate motor speed. The specification is 16N.M. The transmission of torque motor and winding roller is driven by chains.</p> <p>(2) Winding axis is stainless steel. Pneumatic control, equipped with automatic removing device for labor saving.</p> <p>(3) Winder has two sets of switches, one set is press button, the other is pedal switch, easy operation and guarantee safety</p> <p>(4) Maximum winding diameter is 1200mm, and the maximum valid width of reel is 1200mm.</p>	1 set

K	<p>Φ105-120</p> <p>Electric control system</p>		<p>(1) The first and second screws speed is both controlled by 55kw inverter, which is stable and accurate.</p> <p>(2) Solid state relay, air switch and electrical equipments all adopt domestic famous brand.</p> <p>(3) The temperature controller shows each zone temperature accurately and controls heating system.</p> <p>(4) The electric control system has total 15 pcs control zones. The first barrel has 6 pcs. The screen changer has 1 pcs. The second barrel has 7 pcs and the machine head has 1 pc.</p>	1 set
---	--	--	---	-------

2. Specifications

Foam rate: 10-20

Overall size: 25m × 4.1m × 2.8m

Total weight: 13t

3. List of spare parts

NO.	Name	Pc
1.	Tools for take-down screw	1 set
2.	Hex wrench 1 set add 12, 14, 17, 19	each 1pc
3.	Hammer	1 pc
4.	Die mouth adjust rod	1pc
5.	Tool box	1 set
6.	Forked wrench	1 set

7.	Flexible wrench	2pcs
8.	Wire-cutter	1 pc
9.	“—” screwdriver (big and small each one)	2 pcs
10.	“+” screwdriver (big and small each one)	2 pcs
11.	Scissors	1 pc
12.	Box spanner	1 pc
13.	∅ 10mm\∅ 8mm gas line	each 5m
14.	Solid state relay	4 pcs
15.	Temperature controller	3 pcs
16.	Ampere meter,	3 pcs
17.	screw nut for copper pipe	4 pcs
18.	voltmeter	1 pc
19.	Thermocouple	3 pcs
20.	Pressure gauge (big and small each one)	2 pcs
21.	Heater (1 pc for each specification)	each 1 pc
22.	Special tool for meter pump	1 set
23.	Joint Thread hook	2 pcs
24.	Stainless steel mesh	1 m ²
25.	One-way valve for main machine	1 set
26.	Waterway Electromagnetic valve	1 pc
27.	Knife	2 boxes
28.	high pressure rubber pipe	2 pcs
29.	Heating rod for screen changer	5 pcs

2. FULLY AUTO FORMING AND CUTTING INCORPORATED MACHINE



Product introduction :

This forming and cutting incorporated machine designed by our company is all-powerful. The main way is vacuum forming as well as press forming and synthetical forming. It can be used for forming kinds of plastic sheet. This machine adopt PLC control, it has group possesses reliable stability, large forming area, high production and automatic degree. The machine can mainly forming the PSP materiau bl which is used to produce food container, tray, bowl, cup etc. Forming, cutting, stacking are done in the same machine, saving labor, improving efficient, lowing labor intensity and reducing production cost. Production process is to put foam sheet into forming machine, and product and wastage will come out from the rear part.

1. Including main parts as the following:

No	Name	Picture	Detailed technical information	pc
1	Unwinding unit		<p>Unformed PSP placing unit, the feeding of PSP sheet is automatically driven by cylinder, rubber covered roller is used to unroll the sheet. Photoelectric control, and put two rollers sheets for one time. Cycle use.</p> <p>Motor: 0.75kw (gear motor)</p>	1 set

2	Heating unit		<p>Heating mode: ceramic tile radiation Heater (Specification: 240mmX60mm voltage: 380v, power: 550W)</p> <p>Temperature control system : Intelligent temperature controller, eet requires of different temperature control in each heating zone. Heating box can be moved back and forth Heating box full use of asbestos packing</p>	
3	Vacuum Forming unit		<p>Max. forming area: 1000mm×1100mm (according to customer's requirement) Forming pressure: 20t Forming depth Max.: 80mm Working platform Steel board jointing Process method, annealing and shaping processing Forming type: Vacuum forming, press forming, mould forming, comprehensive forming Oil pump motor: 7.5KWX2 sets Vacuum tank: 50LX2 pcs Heating area: 51 pcs Heating power: 128 KW</p>	1set

			<p>Touch screen: multicolor</p> <p>Vacuum pump: 7.5kw, water cycle system</p> <p>Movement of mould table is driven by hydraulic pressure. Four pillar ($\Phi 70$) steering mould table.</p> <p>Two-row chain used to transmission sheet, width of chain is adjustable. driven by 5.5kw servo motor to makes sure high speed and precise transmission.</p> <p>Upper and down baffle plate is movable and cooled by water.</p>	
4	Cutting unit		<p>Max. cutting pressure: 120t</p> <p>Cutting type: hydraulic cutting system</p> <p>Cutting oil pump motor: 11KW</p>	1set
5	Auto stacking unit		<p>Stacking system: controlled by PLC, auto stacking, auto counting, auto removing</p> <p>Collecting products table board: 2 pcs (conveyed by belt)</p>	1set

6	Collecting products unit		<p>The products collection part adopts one 2.2KW motor to drive the ball screw to gradually descend, and the photoelectric switch controls the up and down stroke to save the conveying time.</p> <p>The product out part is one 1.5KW motor direct connection with gear box, and the control is convenient, fast and beautiful.</p>	1set
7	Scroll winding unit		<p>control mode photoelectricity switch</p> <p>Winding speed: controlled by 0.75KW inverter</p>	1set
8	Electric control cabinet		<p>The heating electric cabinet has 53 zones and use Schneider brand solid state reply.</p>	1set

9	Program control cabinet		The control cabinet uses Mitsubishi PLC and Taiwan brand touch screen.	1set
10	Inductor unit		Inductor	1set

2. Demands of public works

1. Voltage: 380V frequency: 50 HZ
2. Production efficiency: 3-5 s/mould
3. Installed power (approx):168KW
4. Total weight (approx):16T
5. Mounting size: 12m×2m×2.6m
6. Compressed air: 0.4~0.7 m³/min,0.7Mpa
7. Cooling water: 1 t/h (recycle)

3.List of spare parts

NO.	Name	Pc
1.	Tool box	1 pc
2.	Hex wrench1 set add 12, 14, 17,19	each 1pc
3.	Forked wrench 6-24, add 13-15, 32#	1set
4.	Flexible wrench500mm, 300mm	2 pcs

5.	Wire-cutter	1 pc
6.	“—” screwdriver (big and small each one)	2 pcs
7.	“+” screwdriver (big and small each one)	2 pcs
8.	Box spanner (big and small each one)	2 pc
9.	Hammer	1 pc
10.	Ampere meter	4 pcs
11.	Temperature controller	4 pcs
12.	Knob	2 pc
13.	Press button(red and green each two pcs)	4 pcs
14.	Sealer for hydraulic pressure parts	1 set
15.	Proximity switch	3 pcs
16.	Photoelectric switch	3 pcs
17.	Heater for forming machine	30 pcs
18.	ceramic clamp (include mould ceramic clamp)	8 pcs
19.	Water line connecting gasket	each 5 pcs
20.	∅ 10mm\∅ 8mm gas line tie-in	Each 10 pcs
21.	∅ 10mm\∅ 8mm three way	Each 5 pcs
22.	Solid-state relay for forming machine	8 pcs
23.	forming oil seal	1 set
24.	cutting oil seal	1 set
25.	∅ 10mm\∅ 8mm ∅ 12\∅ 16 gas line	each 5m
26.	502 Gum water	3 pcs
27.	Thermocouple	3 pcs
28.	Pressure air regulator	1 set
29.	Chain	1 m
30.	high temperature grease	1 box
31.	cutting mould blade	3 pcs
32.	Vacuum magnetic valve	1 set
33.	lubricant gun	1 pc
34.	grease gun	1 pc
35.	oil shovel	1 pcs

36	4V210-08/-220v pneumatic valve	1 pc
37	EVA cutting mould pad	3 pcs
38	vacuum electric magnetic valve	1 set
39	Air blowing magnetic valve	1set
40	Cylinder pipe joint (every type 2 set)	8 set
41	Gas circuit of various specifications of tee, elbow each two	12set

3. PS Recycle Machine



Products introduction :

This machine is special for polystyrene. It adopts single screw, double stage plasticification, increasing compress ratio. The whole machine consists of crusher, main machine, cooling tank and granulator. It can recycle many foamed products, such as ps, xps, eps etc.

1. Including main parts as the following:

No.	Name	Picture	Detailed technical information	Pc
-----	------	---------	--------------------------------	----

A	Crusher		<p>It is wide mouth crusher with big crushing output and can crush the several kinds of plastic products.</p> <p>Crusher power: 15kw</p>	1set
B	Feeding blower		<p>Power: 3KW</p>	1set
C	Φ180+Φ120 Extruder		<p>First screw length: 2000mm</p> <p>First screw diameter: 180mm+120mm</p> <p>First section L/D: 4.5:1</p> <p>Second section L/D: 10:1.</p> <p>Motor: 22KW, driven by inverter. Main motor drives gear box.</p> <p>(1) The screw and the barrel</p> <p>Material: 38CrMoAlA with nitrogen treatment.</p> <p>Barrel heating zones: 4 pcs</p> <p>Voltage: 380V</p> <p>(2) Gearbox:</p> <p>Model: hard tooth-surface 225-16</p>	1set

			<p>Material: FCD25 malleable cast iron.</p> <p>Gear wheel: SCM4 special gear wheel burnishing and heating dealing.</p>	
D	Φ100 Extruder		<p>Second screw length: 800mm</p> <p>Second screw diameter: 100mm</p> <p>L/D: 8:1.</p> <p>Motor: 7.5KW, driven by inverter. Main motor drives gear box.</p> <p>(1) The screw and the barrel</p> <p>Material: 38CrMoAlA with nitrogen treatment.</p> <p>Barrel heating zones: 3 pcs</p> <p>Voltage: 380V</p> <p>(2) Gearbox:</p> <p>Model: hard tooth-surface 173-16</p> <p>Material: FCD25 malleable cast iron.</p> <p>Gear wheel: SCM4 special gear wheel burnishing and heating dealing.</p>	1set

E	Screen changer		<p>The operation of changing net is easy and convinient, without leaking.</p>	1set
F	Main control cabinet		<p>(1) Heat is transfered by thermocouple. The temperature is controlled accurately</p> <p>(2) Brainpower temperature controller is controlled by PID, AC contactor execute</p> <p>(3) The first and second screw speed are both controlled by inverter, which is stable and accurate.</p> <p>(4) AC contactor, air switch and electrical equipments all adopt domestic famous brand.</p> <p>(5) The temperature controller shows each zone temperature accurately and controls heating system.</p> <p>(6) The electric control system has total 7 pcs control zones. The first barrel has 4 pcs. The second barrel has 3 pcs.</p>	1set
G	Stainless steel water tank		<p>Stainless steel tank, one water inlet, one water outlet, cooled by cycling water</p> <p>Water tank size: 2000mm×600mm×280mm</p>	1set

H	Cutter		<p>It adopts high-quality alloy hob, durable, chain drive performance is stable, and noise is lower. The intermediate spring pressure shaft is used to make up for the defect of the strip deviation, shortening the distance between the hob and the press shaft, and improving the winding of the strip. Phenomenon, more suitable for soft plastics. The upper and lower pressure rollers use four gear transmissions to make the pressure roller always bite and never turn around. It adopts the upper roller of silica gel, has anti-corrosion and heat-resistance effects, and has a longer durability and longer life.</p> <p>Motor power:4KW Highest yeild: ≤300kg Pelletizing number: ≤22 Pelletizing size:3X3mm Rotary knife gear:22 Roller(diameterXlength):160X160mm Rotary knife(diameterXlength):160X160mm</p>	1set
I	material conveying rack		<p>Avoid material dropping to ground. make whole machine look beautiful</p>	1set

3、 Technical requirement

Output:80~130kg/h

Pressing material motor power: 1.5kw

Heating power: 35kw

Mounted power: 70kw

Power requirement: 380v three-phase/ 50HZ

Cooling water pressure: ≥0.2Mpa

All size: 13m×3.4m×3m

Total weight: 3T

4、 list of spare parts for recycling machine

NO.	Name	Pc
1.	Tools for take-down screw	1 set
2.	Hex wrench 12, 14, 17,19	each 1pc
3.	Hammer	1 pc
4.	Tool box	1 set
5.	Forked wrench	1 set
6.	Flexible wrench	2 pcs
7.	Wire-cutter	1 pc
8.	“—” screwdriver (big and small each one)	2 pcs
9.	“+” screwdriver (big and small each one)	2 pcs
10.	Forfex	1 pc
11.	Heater	each 1 pc
12.	Temperature controller	1pc
13.	Ampere meter	1 pc
14.	Voltmeter	1pc
15.	Thermocouple	1pc
16.	AC contactor	1 pc
17.	Stainless steel net	1m2