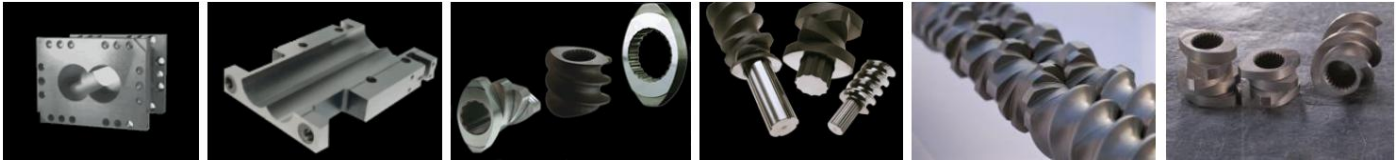




# Biodegradable Corn Starch Granules Making Machine





**Factory planning**

Construction project of biodegradable Production Line

**Technical data**

**Production materials: degradation film blowing production line**

Output:155-255Kgs/h(Depending on customer's formula ,process, production conditions Etc.

Model	Product description	Qty	Price (INR)
1.0	OS-50 degradation granule production equipment: 155-255kg / h.	1 set	<b>INR 1,50,00000.00</b>
1.1	200L high mixer	1 set	
1.2	Conveyor belt Screw feeder	1 set	
1.3	OS-50 twin screw extruder	1 set	
1.4	Electrical control system	1 set	
1.5	12m conveyor belt auxiliary system	1 set	
1.6	Pelletizing machine	1 set	
1.7	One formula	1set	
<b>Note: GST and Freight Charges Extra</b>			

**Technical Data&Quotation**

**Model: OS-50 Twin Screw Extruder Pelletizing Line**

<b>Processing material:</b> Biodegradable Granules	
<b>Machine capacity:</b> 100-255kg/H (Final Output is Subjected To the Formulation&Other Conditions)	
<b>Configuration:</b>	1、 200L High Speed mixer
	2、 Belt Conveyor
	3、 OS-50 Twin Screw Extruder
	4、 Electrical Control System
	5、 Fan Cooling Strand Pelletizing System
6. Pelletizing system	
7、 Spare parts	

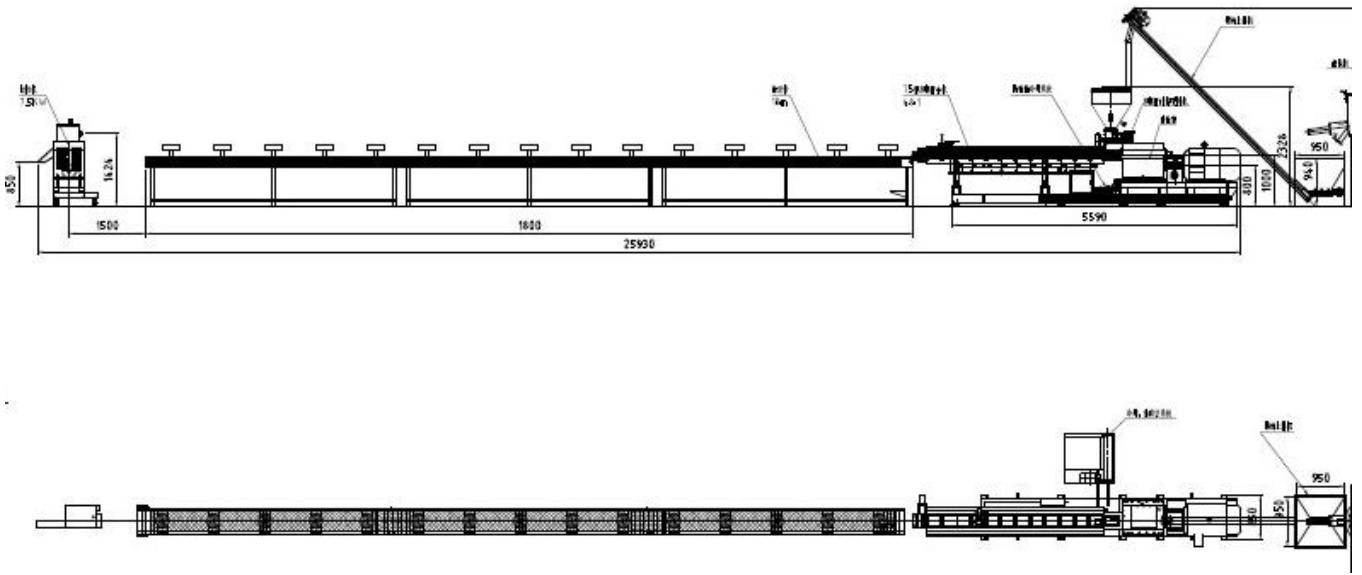
### Part One: Machine Composition

No.	Machine Name	Quantity
1.	<b>High Speed Mixer: 200L</b>	<b>1 Set</b>
2.	<b>Belt Conveyor: 2.2KW</b>	<b>1 Set</b>
3-1.	<b>Main feeder: 1.1KW;</b> twin screw metering type; <b>using frequency inventor</b>	<b>1 Set</b>
3-2.	<b>OS-50 Twin Screw Extruder</b>	
3.1	Main motor: <b>55KW;</b> “Wannan” brand AC motor; <b>using frequency inventor</b>	1 Set
3.2	Gear box with lubrication: <b>500RPM</b>	1 Set
3.3	Processing section(screw shaft, screw elements, barrels, heaters, etc) <b>Screw diameter: 50.5mm; L/D=44:1</b>	1 Set
3.4	Soft water cooling system (external): <b>0.55KW</b>	1 Set
3.5	Vacuum system (external): <b>2.2KW</b>	1 Set
3.6	Screen exchanger by hand	1 Set
3.7	Die head (Strand head,die head,heater)	1 Set
4.	<b>Electrical Control System</b>	<b>1 Set</b>
5.	<b>Fan Cooling Strand Pelletizing System</b>	
5.1	Conveyor Belt: 12 Meters	1 Set
5.2	Cooling fans: 11 Pieces	1 Set
5.3	Pelletizer: 4KW	1 Set
6.	<b>Spare Parts and Tools</b>	<b>1 Set</b>

**Part Two: Machine Working Condition**

<b>Power</b>	1. <b>Total power: 140KW Actual power: 90KW</b>
<b>Supply</b>	2. 50/60HZ 220/380/480 V 3P OR CUSTOM POWER
<b>Water</b>	1. Recycling water: water pressure:~0.45MPa
<b>Supply</b>	2. Water temperature:≤38℃ 3. Industrial soft water (none-ion water) water temperature ≤38℃ 4. Circulating water: for barrels cooling; using soft water(distilled water) to prevent scale 5. External circulating water: for cooling internal circulating water and water trough 6. Water supply suggestion: build pool 25~30m <sup>3</sup> outside of workshop and pump the water
<b>Size</b>	<b>21M*4M*4M (L*W*H)</b>
<b>Labor</b>	1-2 people

**Part Three: Machine Layout**



*(This layout is just for your reference)*

**Part Four: Detailed Technical Info**

**1. 200L High Speed Mixer**

	Total capacity:	<b>200L</b>
	Effective capacity:	<b>150L</b>
	Motor power:	<b>30/42KW</b>

**2. Belt Conveyor**

	Motor power:	<b>2.2KW</b>
	Function:	Convey mixing materials.

**3-1. Main Feeder**

	Type:	Twin Screw non-mesh metering type
	Position:	The first barrel
	Reducer:	WB-120-LD-1.1, Cycloidal needle wheel deceleration motor
	Motor power:	<b>1.1KW</b>
	Adjust Speed:	<b>Using frequency inventor</b>
	Body:	With horizontal blender, prevent bridging
	Hopper:	S/S, $\delta=1.5\text{mm}$
	Screw material:	45# steel, surface hard chromium treatment
	Barrel material:	carbon steel, surface hard chromium treatment.
Open joint box:	S/S, with horizontal blender, prevent bridging	

### 3-2. OS-50 Twin Screw Extruder



#### 3.1 Main motor

Motor power:	<b>55KW</b> , Y2 type level 4 AC motor
Adjust Speed:	<b>Using frequency inventor</b>
Rotation speed:	<b>1480rpm</b>

#### 3.2 Gear box



Shell:	Nodular cast iron, shock absorption, prevent noise
Input speed:	<b>1480rpm</b>
Output speed:	<b>500rpm</b>
Needle bearing:	Japan <b>"IKO"</b> brand
Radial axletree:	Japan <b>"NSK"</b> brand
Reducer material:	<b>20CrNi2MOA</b> , high torque, hard gear face
Reducer hardness:	<b>HRC58-62</b>
Lubrication system:	Gear and bearing adopt oil lubrication Gear meshing and bearing point adopt shunt oil spray strong lubrication way
Lubrication cooling:	External cooler, 1.3m <sup>3</sup>
Oil pump type:	BB-B10, 0.55KW

#### 3.3 Screw



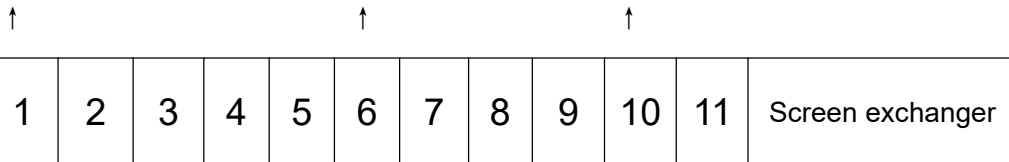
Structure:	Divided into conveying screw block, mixing screw block, kneading screw block and reverse rotary screw block; Screw parts is in tandem array.
Diameter:	<b>Φ50.5mm</b>
L/D:	<b>44:1</b>
Screw element material:	<b>38CrMOALA</b> , high temperature vacuum quench treatment.
Screw element hardness:	<b>HRC60-64</b>
Axis material:	<b>40CrNiMoA</b> , high toughness, high bending strength, high quality alloy steel.
Axis hardness:	<b>HB300-350</b>
Screw rotate mode:	Double screw mesh type co-rotation

	Screw element and axis connection:	Involute connection, high strength, bearing load, dismantling conveniently
	Screw head and cap connection:	Back tooth connection, ensure connection fastening.
<b>3.4 Barrel</b> 	Material:	<b>45# steel</b> is as body, ∞ inner hole adopts fine double alloy casting bush
	Connection:	High strength inner hexagon bolts
	Cooling method:	<b>Soft water cooling</b> for barrel
	Length:	<b>190mm/section, 11 sections, total 2090mm.</b>
	Feeding barrel:	<b>The first barrel</b>
	Nature Exhaust Barrel:	<b>The sixth barrel</b> , which will be closed when shipping
	Vacuum barrel:	<b>The tenth barrel</b>

Feeding barrel

Nature Exhaust Barrel

Vacuum barrel



<b>3.5 Heating section</b>	Heater type:	Casting aluminum heaters
<b>3.6 Soft water cooling system</b> 	Water pump power:	<b>0.55KW</b>
	Electromagnetic valve:	Pin valve. Taiwan brand
	Soft water pipe:	φ60mm, separate with main frame
	Connection:	Copper pipe
	Heat ex-changer:	LS-415
<b>3.7 Vacuum system</b> 	Vacuum position:	The barrel
	Motor power:	<b>2.2kw</b>
	Vacuum type:	SK-0.8
	Vacuum pressure:	-0.07~0.09Mpa
	Vacuum tank:	400*600mm
	Installation:	Outside, convenience for clearing and repairing
<b>3.8 Screen exchanger by hand</b>	Position:	Fixed between barrel and head
<b>3.9 Die head</b>	Pressure sensor:	One piece
	Head melting temperature sensing display device:	One piece
	Die head heater:	One piece

### 3.10 Interlock system

- A. OMRON intelligent instrument, PID parameter self-regulation, heater broken circuit indication
- B. Interlock for twin screw extruder and gear box
- C. Interlock for twin screw extruder and feeder: extruder stops delayed when breakdown happen on the feeder; feeder stops immediately when extruder break down.
- D. Twin screw extruder head is installed with indication of melt pressure and temperature. Melt pressure is interlocked with main frame, over pressure protect.

## 4. Electrical Control System



Voltage:	50/60HZ 220/380/480V 3P
AC contactor:	<b>Delta brand</b>
Air switch:	<b>LG brand</b>
Intermediate relay:	<b>OMRON brand</b>
Temperature controller:	<b>OMRON brand</b>
Low voltage electrical and button, switch:	All use the <b>Delixi</b>
Electric control cabinet:	Temperature control system and driving system

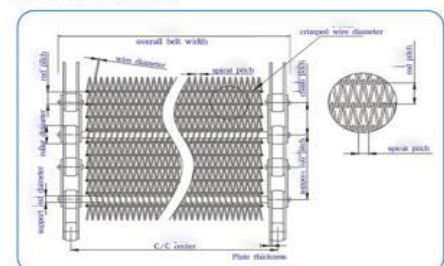
## 5. Fan Cooling Strand Pelletizing System



Conveyor Belt:	<b>1 2Meters</b>
Cooling fans:	<b>1 1Pieces</b>

- 1) mesh belt: length 12 meters, stainless steel, mesh 3x11
- 2) deceleration motor: power 3KW, speed ratio 10:1
- 3) cooling fan: external rotor axial flow fan 120W, quantity 23
- 4) frame structure form: detachable type

Chain driven belt (Mesh belt)





## 6、Gantry granulator



The 500 gantry type is a high-yield pelletizer with an output of 300,500kg per hour and a cutting number of 15,30pieces.

Product advantages: 1: cost-effective, cost-effective.

2: accurate granulation is carried out through strip introduction and bar positioning.

3: easy to use and control.

4: the introduction of high-precision assembly technology and manufacturing technology is a substitute for domestic imported plastic granulator.

5: the maintenance cost is lower, it is more suitable for the production line with higher product quality requirements and high performance-to-price ratio, and the product quality is reliable and stable.

6: omni-directional humanized safety device to ensure automatic stop of cover opening and safety of operators.

7: the motherboard is inlaid with 304 stainless steel plate to effectively prevent plastic particles from being contaminated.

8: the overall closed noise reduction device design, lower noise, bring you a more comfortable working environment.

9: the gap between the hob and the fixed cutter of the soft material gantry granulator is less than 0.06mm, and the high-precision shaft core can process materials containing no more than 50% glass fiber. The length of the cut plastic particles is more uniform, and the appearance of the finished particles is more beautiful and beautiful.

10: according to the different requirements of customers, we can install the top configuration: NSK imported bearings, Siemens motors, various imported frequency converters, imported electrical appliances and so on.

## 7. Spare Parts and Tools

No.	Name	Quantity
1.	Screw element	300mm
2.	Oil seal	3sets
3.	Thermocouple	1set
4.	Inner hexagon spanner	1set
5.	Fuse	3pieces
6.	Glove	1sets
7.	Relay	3pieces
8.	Technical documents	1set

### Part Five:Payment

**40% advance payment and balance before shipment or with in 30days.**

6.1 Buyer should prepare the factory plant, water supply, power supply and air supply before the supplier's engineer arrived.

6.2 Supplier will send 1-2 technicians for machine's installation, commission and training,

6.3 Buyer should undertake the engineer's traveling expenses, hotel and food fee

6.4s Buyer should arrange enough workers to cooperate working with our engineer and prepare the necessary tools for working.

### Reference Images



## Reference Images





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