

BEIER MACHINERY CO., LTD

2 Layer PET Sheet Extrusion Line




(The picture is only for reference)

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1. Project evaluation: A two layer PET sheet line at 33” wide.

This line could also be a three layer line A/B/A configuration

1.1. Raw material & Final product:

Raw material	APET+PETG
Final product	Two layer sheet, A/B (10%-90%)
Output capacity	Output: 400-500kg/hr
Specifications of sheet	Thickness: 0.3—1.2mm, Max. Width: 800mm
Picture of the final product	

1.2 Work conditions provided by the customer at the installation site

Workshop	Dimension: 25M(Length) × 3M(width) × 4M(Height) Crane: Machine positioning or forklift
Working Temperature & Humidity	≤40°C, ≤95%
Power supply & Installation power	Supply voltage: 3*480V+N+PE; Control voltage: 24VDC+220VAC; Frequency: 60HZ+-2%
Wire/cables:	Wires/cables from the power supply to the control cabinet of this production line and all electrical cables from the control cabinet to each machine.
Cooling Water	Water supply to the machines and reservoirs
Lubrication oil:	Exxon mobile
Compressor	Supply compressed air
Manpower	2 Persons

1.3 Energy consumption

Installation power	About 352KW
Cooling Water	≤20°C, ≥0.3Mpa, ~15~16 M³/hr
Compressed air	0.3m³/min, >0.5Mpa

1.4 Main commercial terms

Project name	2 Layer PET sheet extrusion line
Payment terms	50% down payment by W/T, 50% by W/T before delivery and after inspection
Delivery time	120 days from the date of receiving the down payment and a technically clarified purchase order.
Packaging	Wood pallets/crates covered by plastic film
Warranty period	13 months from the date of the bill of lading

1.5 Machinery List & Budget Price

No.	Machine	Qty.	Price (USD)	
1	Crystallizer and Dehumidifier system (400kg/hr)	1 set		
1	Dehumidifier system (100kg/hr)	1 set		
3	SJ120/33 Single screw extruder	1 set		
4	SJ65/33 Single screw extruder	1 set		
4.1	PLC control system	1 set		
5	Hydraulic screen changer	2 sets		
6	Melt Pump	2 sets		
7.1	Sheet Die	1 set		
7.2	Feed block			
8	45 Degree Three roll calendar stack	1 set		
9	Temperature controllers for the rolls	1 set		
10	Cooling frame	1 set		
11	Haul off	1 set		
13	Double station winder	1 set		
Total amount EX Works				
Inland transportation cost to Shanghai port (3*40HQ)				
Packaging cost				

2. Technical specifications

2.1. Technical data

1. Crystallizer and Drying System (400kg/hr)



For APET

PET Crystallizer

Model: SCR-1600U

Heating power: 96KW

Blower power: 7.5KW

Stirring motor power: 1.5KW

Volume: 600L

Capacity: 500kg/hr

Vacuum loader

Model: SAL-3.5HP-UG

Motor power: 3.5KW

Volume: 24L

Capacity: 500kg/hr

Storage silo

Model: MST-200

Dehumidifier unit

Model: DDS-3000U/1500H

Volume: 3000L

2. Dehumidifier system (100kg/hr)



For PETG

Hopper dryer

Model: SHD-40U

Volume: 40L

Heating power: 3KW

Blower power: 0.12KW

Dehumidifier

Model: SCD-600U/400H

Volume:600L

Heating power: 1.8+7.2KW

Blower power: 3.75+0.75KW

Loading power: 1.5KW

3. SJ120/33 single screw extruder



Screw :

Diameter: 120mm

L/D: 33:1

Material of the screw: 38CrMoAlA
 Surface treatment: Nitride, thickness: 0.4—0.7mm
 Maximum rotating speed: 75rpm

Barrel:

Inner processing: surface hardness of barrel >980HV
 Heating zones: 7pcs
 Heating mode: Ceramics heaters+ stainless steel covers
 Cooling mode: Air fans: 0.37 KW each pc

Drive motor:

Motor power: 132KW, AC motor

Vacuum degassing system

Power: 4kw

4. SJ65/33 single screw extruder



Screw :

Diameter: 65mm
 L/D: 33:1
 Material of the screw: 38CrMoAlA
 Surface treatment: Nitride, thickness: 0.4—0.7mm
 Maximum rotating speed: 120rpm

Barrel:

Inner processing: surface hardness of barrel >980HV
 Heating zones: 5
 Heating mode: Cast aluminum with stainless steel cover
 Cooling mode: Air fan: 0.25 KW each pc

Drive motor:

Motor power: 45KW, AC motor

Vacuum degassing system

Power: 2.2kw



Electric cabinet for extruders to the sheet die

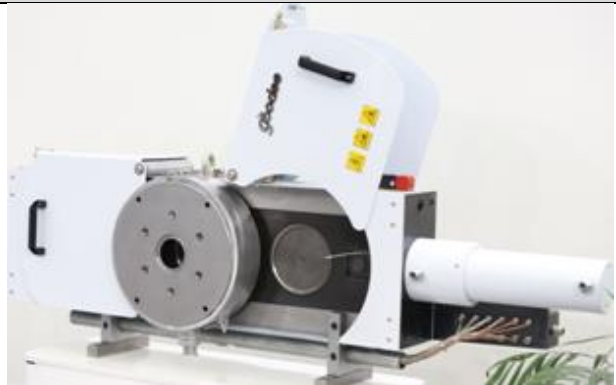
PLC Module +Touch screen: Siemens

Contactors: Schneider

Air Switches: LG

Relays: Omron

5. Hydraulic screen changer



Screen-changer has melt pressure and temperature transducers

Maximum pressure: 20MPa

Hydraulic control system

Decompression valve

Heating power: 3KW+2.9KW (GD-SSP-70)

3.8KW+3KW (GD-SSP-100)

6. Melt pump



2 sets:
 JC50-3 for the SJ 65/33 extruder
 JC70-3 for the SJ 120/33 extruder

JC50-3

Heating power: 2KW
 Drive power: 5.5-7.5KW
 Rotary speed: 65RPM

JC70-3

Heating power: 3.2kw
 Drive power: 7.5-11kw
 Rotary speed: 60RPM

7. Sheet die



Material

Heat-resistant tool steel 5CrNiMoV Alloy
 Inner surface polished and Cr treated,
 Hard chrome die lip flow surface, thickness 0.04—0.06mm, other parts 0.04-0.05um
 Material of the heaters: stainless steel rod type heaters

Dimensions

Width : 1150mm
 Die lip: 1 set
 Upper lip flexible with precise adjustment, lower lip normal adjustment

8. Three roll calendar



Feeding method

Middle and bottom roller, Vertical structure

Roller dimensions

Φ350×1500mm 1 pc

Φ500×1200mm 2 pcs

Structure of the rolls:

Spiral structure

Position adjustment method

Manual adjustment

Drive system

Servo motor power: 2.2KW x 3

Surface treatment

Core Hardness: HRC30—35, Quenched thickness: 3-5mm

Thickness of Cr layer: 0.1-0.12mm

Surface hardness: HRC53

Surface coarseness: 0.01mm

Camber degree: 0.015mm

Temperature difference on the rolls

Not more than 1°C

Movement

Motor power: 0.55KW, Moving range: 0-5m (forward and back)

Security protection: Cord switch

9. Temperature controller



Medium: water

Cooling pump power: 3KW×3

Heating power(electric): ≥12KW×3

Controls the water temperature automatically

10. Cooling frame (with side edge trim cutter)



Cooling frame

Length: 4000mm
 Moves together with the calendar
 Diameter: $\Phi 63 \times 1200$ mm
 Material: Stainless steel pipe

Side edge trim and divided cutter

Quantity of knife: 2
 Position: close to the Calendar
 Impact method: Mechanical

11. Haul off



Pneumatic
 Rubber roller dimensions: $\Phi 220 \times 1200$ mm
 Motor power: 4kw, Servo motor
 Pneumatic impact
 Cut-off sheet edge coiler: 2pcs Encoder counting system

12. Double station winder



Torque motor: 10NM * 2pcs
 Double station winder

2.2 Spare part (free)

No.	Spare part	Unit	Qty.	Application
1	Dismantling tools	pc	1	Screw
2	Electromagnetic valves	pc	2	Gear box (Temperature controlling)
3	Oil seal	pc	6	Gearbox
4	Knife	pc	10	Side cutter
5	Thermocouples	pc	10	Electric cabinet
6	Pressure sensors	pc	2	Screen changer
7	Heaters	pc	2 for each	SJ120 /SJ65 extruder
8	Heaters	unit	1	Die head

3. Service

Technical documentation	<p>All the symbols on the equipment will be in English. BEIER is responsible for providing a general layout plan, electrical plan, installation orientation and a manual in English for the Buyer.</p>
Arrangements for inspection, installation and testing of the equipment	<p>a. After all the equipment is delivered to the customer's factory; the Buyer is responsible for all preparation work, e.g. electricity supply, water supply, cranes and labor, etc.</p> <p>b. BEIER will prepare visa applications for their engineers, who will review the equipment installation and testing at the Buyer's factory.</p> <p>c. The Buyer will buy a round-trip air ticket for the engineer(s) after the visa application is approved. The Buyer is responsible for all expenses generated, e.g. visa application fees, meals, accommodation and an allowance of \$125.00 per day for each engineer.</p> <p>d. The engineer(s) will provide free training for the operators and maintenance people in Buyer's factory.</p> <p>e. If the Buyer does not request commissioning by BEIER's engineer(s) within four months from the date of the bill of lading, it will be accepted that all the equipment has been successfully tested and approved by the Buyer.</p>

<p>Quantity and quality guarantee</p>	<p>In the case of quantity discrepancies or damage to any of the equipment at the destination, the Buyer will file a claim within 30 days after the arrival of the goods at its destination. The insurance company and the shipping company will be responsible for all discrepancies and damage caused by the shipping company or other transportation companies.</p> <p>a. Guarantee period and after-sales services: 13 months from the date of the bill of lading.</p> <p>During this guarantee period, BEIER will provide spare parts without charge in cases of quality discrepancies. If malfunctions are caused by the Buyer's improper equipment operation; BEIER will provide the Buyer with spare parts at cost prices.</p> <p>a. Long-term service:</p> <p>Beyond one year, BEIER will provide the Buyer with spare parts at reasonable prices and provide long-term technical guidance.</p>
<p>Validity</p>	<p>Three months from the quotation date.</p>

We thank you for your inquiry

Beier Machinery