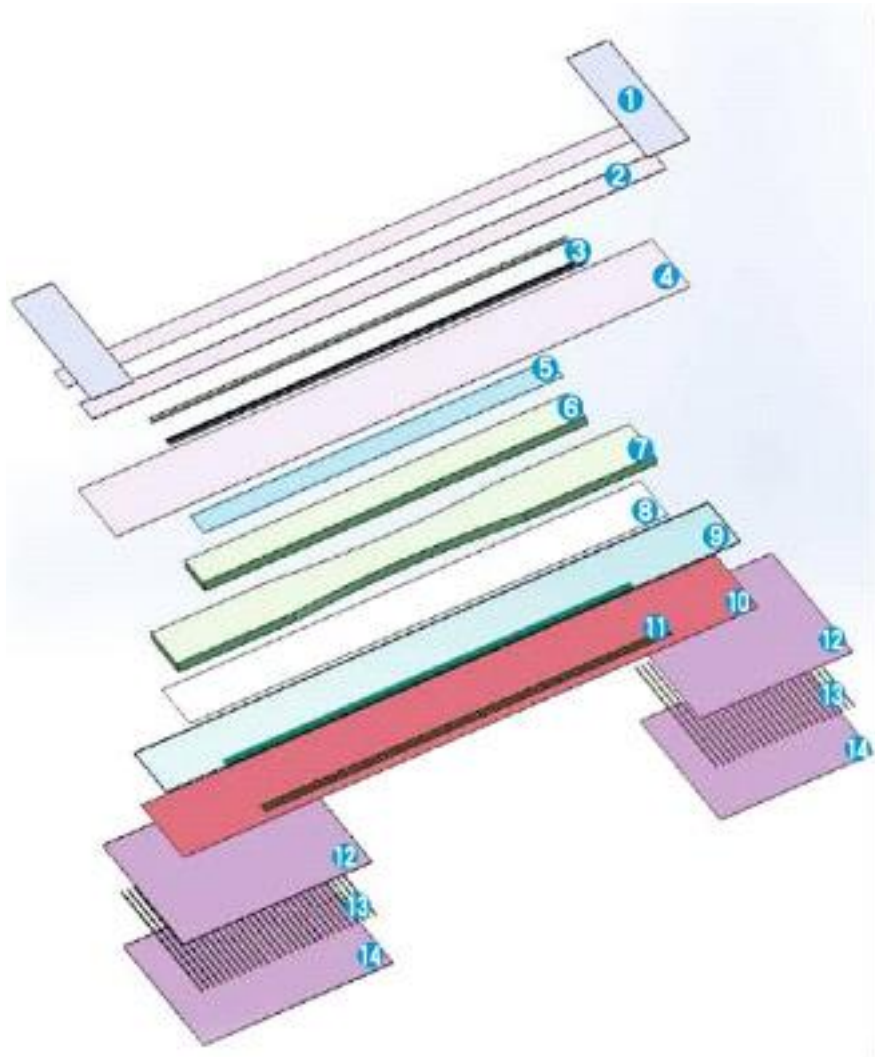


OSAKA Full Servo Pull-Up Baby Diaper Machine



PRODUCT DRAWINGS




Main technical Parameters

1	Design speed	600pcs/min
2	Working speed	500pcs/min
3	Qualified rate	≥ 97% (exclude the wastage due to the glue applicators and materials splicing joint)
4	Efficiency	≥ 85%
5	installation capacity	280KW
7	Electricity	380V ±5%、50HZ
8	Wire	Three phases four wires 380V/50Hz (ground wire)
9	Air pressure	0.6Mpa
10	Total weight	About 80tons
11	Machine size	38×8×4.5 M(L×W×H)
12	Working space	42×11×6 M (L×W×H)
13	Machine color	Rice white ,can be changed by order
14	Product size	3sizes
15	Containers	6X40HQ

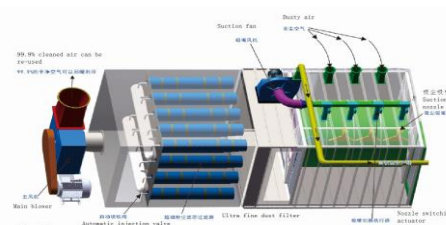
PRICE DETAILS

	Standard Configurations	Quantity	Price
1.	Main machine	1set	12,50,00000.00
2.	Full servo drive system	1set	
3.	High speed crusher	1set	
4.	70' LED screen	1set	
5.	Remote Control module	1set	
6.	Web guider	15sets	
7.	Mitsubishi servo motor	54sets	
8.	Davit arm(200KGS)	2sets	
9.	Dust collection unit	1set	
10.	SAP feeding unit set on ground(servo control)	1set	
11.	Noisy reduce	1set	
12.	Raw materials with auto unwinding, auto splicing, auto tension control, auto rejection	8sets	
13.	Color tape position cutting	1set	
14.	Protection door	1set	
15.	Glue applicators , Nordson China	9sets	12,50,00000.00
16.	Basic line price included:		

Optional configurations

1	<p>Auto stacker+auto bagger</p>  <p>(Full automatic packing solution ,can save at least 10-12 packing workers, if choose this ,no need to choose stacker)</p>	1set	Ask For Price
2	<p>Change to PTT glue applicators (save machine cost ,but needs to use more glue)</p>	13sets	Ask For Price
3	<p>Stacker</p>  <p>(Semi auto packing solution ,can save 4-6 packing workers)</p>	1set	Ask For Price
4	<p>Vision detection system 视像检测</p>  <p>(can reject any polluted product during the production,100% detection)</p>	1set	Ask For Price
5	<p>Back sheet positioning cutting (can have regular same backsheets pictures)</p>	1set	Ask For Price
6	<p>Negative pressure rotate style dust collect</p>	1set	Ask For Price

BORN IN JAPAN & NURTURED IN INDIA

	 <p>(Top dust collector effect ,have more clean workshop)</p>		
7	<p>Backsheet online lamination (can save material cost of backsheet ,economic in long term)</p>	1set	<p>If use Chinese glue machine Ask for price If use USA glue machine Ask for Price</p>
8.	<p>Air compressor 37.5KW (Necessary for the production line ,could be purchased locally)</p>	1set	Ask for Price
9	<p>Lycra auto splicing system (100% run out of the elastic yarns ,increase the efficiency and make the elastic effect better)</p>	1set	Ask for Price
10	<p>Metal detector 金属检测 (can detect the Metal pcs inside of the diapers, part of QC) (</p>	1set	Ask for Price
11	<p>Air shower room (wind shower clean before enter into the workshop) (</p>	1set	Ask for Price

Machine main parts brand:

	Name	Brand	Origin
1	Servo motor	Mitsubishi	Japan
2	Auto web guider	FIFE	USA
3	Touchable screen	Banner	USA
4	PLC controlling system	Mitsubishi	Japan
5	Sensor	Banner	USA
6	Safety production	Schneider	France
8	Cutter raw material	M7	USA
9	Gear (according to usage)	HRB/BEM/NSK/SKF	China/Germany/Japan/Sweden
10	Timing belt	Optibelt or Gates	Germany/USA
11	Low voltage electronic	Schneider	France
12	Electrical connection terminal	Phoenix	Germany
13	Temperature controlling system	Omron	Japan
14	High-speed joint	SMC	Japan
15	Pressure regulating valve	Airtac	Chinese Taiwan
16	Pneumatic element	Airtac	Chinese Taiwan
17	Solenoid valve	Airtac	Chinese Taiwan
18	Moisture separator	Airtac	Chinese Taiwan
19	Automatic fault alarm	Mitsubishi	Japan
20	Planetary reducer	APEX	Chinese Taiwan
21	Liner guide rail	Hiwin	Chinese Taiwan

Machine Standard Configuration :

1. Machine frame structure and main characters

- 1) Reasonably solid square steel frame: Panel 25mm thick, adopt specular paint, 6 surfaces processing, solid cage with 60 * 60mm square steel in module design, the base frame with square tube 120mm × 120mm, 18mm thick bottom plate, 6 surface processing also ,widening after gearbox for repair. Spliced type main board by screw, make sure the high efficiency .
- 2) Glue applicators put on the 2nd platform, shorten the glue supply distance
- 3) The main air suction bucket is installed with negative pressure display; the air scoop driven wheel is installed with quick fixture to facilitate the removal of the belt; the lower side of the conveyor belt above the material is installed with support plate to prevent the polymer and foreign matters from falling and polluting the lower material (the belt specification is labeled for maintenance).
- 4) The back doors of the machine has sound proof foam

2. Crusher system

- 1) Upright pulp frame, equipped with auto rising system by sliding motor, more convenient for loading and uploading pulp, the diameter of pulp should be ≤1400mm
1400mm
- 2) Single Entrance Crusher, horizontally feeding, adopted with alloy sawmill, can crush untreated, half treated and treated pulp, pulp width is ≤480mm , the capacity of crusher motor is 30KW, bursting strength of pulp is ≤1200kpa, can crush about 600kg/hour. Equip with rubber base,can absorb vibration and noise
- 3 Pulp feeding system adopted with servo control, can change according to the production speed and adjust the feeding quantity automatically, also adopted with auto detecting function, will auto stop and alarm when raw material runs out or break up
- 4) the roller type wood pulp feeding mechanism uses both ends of the air cylinder to pressurize, and the manual valve controls the action of the air cylinder to facilitate the loading of wood pulp
- 5) Crusher bearing has overheating protection

3. Fluff forming system

- 1) Fluff is single and continuously drum forming, diameter of drum former is around 1500mm, fluff core width is 100-120mm (according to order)
- 2) Fluff vacuum adopt the side sucking mode, extending the vacuum area, to make fluff high density and soften
- 3) SAP spray into fluff bin and mixed together (adjust SAP with more in middle layer and less in upper and bottom layer), equip with pressure meter.
- 4) Fluff output with guiding layer (no SAP),mixed layer (fluff fully and evenly mixed with SAP), bottom layer (no SAP)

- 5) Height adjusted rotating brush, to control fluff thickness even
- 6) Fluff core forming blower capacity is $\geq 75\text{KW}$, air pressure is $\geq 10000\text{Pa}$, brand: SGM
- 7) Adopt with dust collecting device, improve the environment of workshop
- 8) Fluff core use forming drum, Use new type transmit and big diameter and power fan to decrease power consumption and improve efficiency. Forming drum use stainless steel body, and organic glass panel, reduce the generation of static electricity, convenient to observe the forming effect; drum has regularly cleaned and blowing, dust unified collect by bag) (cotton core weight 10-16 grams, in the uniform production, pulp weight allowed error $\leq \pm 6\%$)

4. SAP feeding system

- 1) Adopt with servo control, the weight can be set according to requirements on touchable screen
- 2) Adopt with belt transmission type, mix in fluff bin based on belt running speed with fixed quantity, wrapped after mixed with fluff
- 3) Continuously feeding evenly with fixed quantity, SAP fully mixed with fluff, including heating function.
- 4) Adopt sensor detection, will limit detection alarm and automatic feeding
- 5) SAP feeding mixed with fluff. SAP quantity is controlled by servo, can be changed according to main machine speed, and can be shown on the touchable screen
- 6) SAP being fixed with quantity of 50 kg, the storage box equipped on the ground is $\geq 200\text{kg}$, when SAP bin storage reached to lower position, the ground storage box will automatically feeding, the maximum quantity of each piece is 15g, each piece adding quantity can be adjusted between 4-15g, the deviation of each piece on stable speed will not more than $\pm 5\%$, the feeding quantity reach to set value when main machine speed reach to 50 pcs/min, will automatically stop feeding when main machine speed is lower than 50 pcs/min.
 - 1) Bottom tissue feeding, roll diameter $\phi 800\text{mm}$
 - 2) Double gas expanded shaft rack, independent servo drag, double pendulum bar storage rack, instant tension control, frequency A/B shaft unwinding, core diameter 3 inches.
 - 3) Zero speed auto splicing device, automatically rejection
 - 4) Raw material detective, auto alarm and stop when raw material breaks up
 - 5) Raw material connector detective, automatically rejection
 - 6) Adopt with automatically web guide, USA FIFE

5. Upper tissue, roll diameter $\phi 800\text{mm}$

- 1) Double gas expanded shaft rack, independent servo drag, double pendulum bar storage rack, instant tension control, frequency A/B shaft unwinding, core diameter 3 inches.
- 2) Zero speed auto splicing device, automatically rejection
- 3) Raw material detective, auto alarm and stop when raw material breaks up
- 4) Raw material connector detective, automatically rejection
- 5) Adopt with automatically web guide, USA FIFE

6. Fluff core wrapped by upper and bottom tissue, also can be wrapped by one whole piece tissue

- 1) Tissue folding unit
- 2) Fluff core flat compact roller 1 set, compact by cylinder with heating device
- 3) Fluff core rhombic embossing compaction device 1 set, compact by cylinder with heating device
- 4) The cylinder is pressurized, and the pressure is adjusted by the manual pressure regulating valve. Screw type wedge block structure is convenient to adjust the gap between the upper and lower roller bodies. When the machine is started, it will automatically press down and lift up when the machine is stopped
- 5) the upper and lower rollers shall be heated, and the temperature shall be controlled by a separate temperature controller

7. ADL feeding, roll diameter ϕ 800mm

- 1) Double gas expanded shaft rack, independent servo drag, double pendulum bar storage rack, instant tension control, frequency A/B shaft unwinding, core diameter 3 inches.
- 2) Zero speed auto splicing device, automatically rejection
- 3) Raw material detective, auto alarm and stop when raw material breaks up
- 4) Raw material connector detective, automatically rejection
- 5) Adopt with automatically web guide, USA FIFE
- 6) ADL non woven cut shortly and transfer unit

Fluff core inner cut device 1 set, adopt frame type structure, increase the cutter life

8. Leak cuff unit

- 1) Hydrophobic nonwoven supply, roll diameter ϕ 800mm
- 2) Double gas expanded shaft rack, independent servo drag, double pendulum bar storage rack, instant tension control, frequency A/B shaft unwinding, core diameter 3 inches.
- 3) Zero speed auto splicing device, automatically rejection
- 4) Raw material detective, auto alarm and stop when raw material breaks up
- 5) Raw material connector detective, automatically rejection
- 6) Adopt with automatically web guide, USA FIFE
 - a) Central cutting device, using electric cutting mechanism, using separate web guide on each side after cutting, USA FIFE
 - b) Leg guard lycra feeding
- 7) 2 pieces on each side
- 8) Active feeding, servo control, the tightness of the lycra can be set on the touch screen
- 9) Auto alarm and stop when raw material breaks up
- 10) Hydrophobic non-woven folding, inside and outside folding edge, adhesion promoting compacting device

9. Hydrophilic nonwoven supply, roll diameter ϕ 800mm

- 1) Double gas expanded shaft rack, independent servo drag, double pendulum bar storage rack, instant tension control, frequency A/B shaft unwinding, core diameter 3 inches.
- 2) Zero speed auto splicing device, automatically rejection
- 3) Raw material detective, auto alarm and stop when raw material breaks up

- 4) Raw material connector detective, automatically rejection
 - 5) Adopt with automatically web guide, USA FIFE
10. Three pieces complex, two sides fixing unit, adhesion pressing.
11. Bottom film supply
- 1) bottom film supply, diameter ϕ 600mm
 - a) Two pneumatic shaft racks, servo individual driving, two pendulum rod, tension control, frequency converter A/B unwinding, auto splicing without stopping machine, auto waste rejection , core diameter 3 inches.
 - b) Zero speed auto splicing device, automatically rejection
 - c) Material detection, auto alarm and auto stop when breaking
 - d) detection, waste auto rejection
 - e) web guider USA FIFE
 - 2) leg cuffs lycra supply
 - a) 2-3 lines each side
 - b) Auto feeding, servo control, lycra tension data is set on the screen
 - c) auto alarm and auto stop when breaking
12. Surface layer, absorption core, bottom film pressing
13. One set products cutting unit
14. inner waist nonwoven supply
- 1) inner waist nonwoven unwinding, roll dia 800mm
 - a) Two pneumatic shaft racks, servo individual driving, two pendulum rod, tension control, frequency converter A/B unwinding, auto splicing without stopping machine, auto waste rejection , core diameter 3 inches.
 - b) Zero speed auto splicing device, automatically rejection
 - c) Material detection, auto alarm and auto stop when breaking
 - d) materials connection joint auto detection, waste auto rejection
 - e) web guider USA FIFE
 - 2) front color tape passive unwinding, roll dia 500mm, max cut size 100*100mm
 - a) Two pneumatic shaft racks, passive unwinding, servo individual driving
 - b) Material detection, auto alarm and auto stop when breaking
 - c) web guider USA FIFE11
 - d) Adsorption transmission, position short cut, transfer, glued pressing with inner waist nonwoven
 - 3) waist elastic lycra supply
 - Front lycra 22lines
 - Back lycra 25linesActive feeding, servo control, the tightness of the lycra can be set on the touch screen

15. outer waist nonwoven unwinding, roll dia 800mm
 - 1) Double gas expanded shaft rack, independent servo drag, double pendulum bar storage rack, instant tension control, frequency A/B shaft unwinding, core diameter 3 inches.
 - 2) Zero speed auto splicing device, automatically rejection
 - 3) Raw material detective, auto alarm and stop when raw material breaks up
 - 4) Raw material connector detective, automatically rejection
 - 5) Adopt with automatically web guide, USA FIFE
 - 6) combine with inner waist NW
16. waist fluff part lycra cut unit, in case this part gets wrinkled.
17. waist middle slitting, after slitting, FIFE
18. core turns into horizontal direction,
19. core combines with waist material
20. waist nonwoven side folding
21. product vertical folding, pressing and transmission, FIFE before circular welding
22. Z tape: passive unwinding, pulling, absorption transmission, short cut, combine.
23. device on circular welding two sides(heated). This device is controlled by servo motor. It works by heat pressing based on material features. It adopts the most advanced circular welding device to ensure the production high speed running. This part material needs to be confirmed.
24. final cut unit
25. products turn into 90 degree horizontal direction
26. auto rejection exit. It's controlled by pneumatic and PLC. PLC
 - Splicing connection joint products
 - Any other unqualified products
27. Horizontal stacker transmission Servo driving horizontal stacker adopts double pusher and double exits. It press 25% and speed is 35-40bags/minute. Each push pieces range is 12-36pieces/push. (Normally 12-18pcs)

Note: the stacker is not included into the main machine. Customer needs to choose it or other packing ways

28. Driving system

- 1) Adopt several servo motors for transmission controlling, main raw materials unwinding driven by frequency control, to guarantee the precision and stability of the machine in high speed, and can realize not change any transmission parts to change the product's size, can directly set on PLC, easy to operate and maintain
- 2) All cutter racks adopt with CNC processing, guarantee the precision of bade and prolong the cutter's lifetime
- 3) Cutter adopts servo planetary reducer+ universal joint coupler transmission
- 4) Stressed timing belt is widen

29. Air supply

- 1) Vacuum, drum former, dust and wastage collection during production process adopt with several sets air pump and positive pressure blower
- 2) Air supply is set on the top of machine, made by stainless steel drawing tube, reduce the static electricity, high pressure blower unified air supply, pressure can be adjusted
- 3) Wastage pipe made by PVC material, each 2 meters has transparent pipe for observing
- 4) There are two gas supply lines, one is a pressure-holding line for the cylinder and solenoid valve, and the other is a pressure-relief line for the glue gun and waste discharge, without interference.
- 5) Air tube is set on the top of machine, unified conveyed by galvanized pipe, connect necessary distributing pipe at the nearest place, neatly arrangement

Electrical parts

1. Servo System

- 1) All servo motors unified controlled by PLC, realize the precious adjustment of each driving unit
- 2) Each servo motor running condition can be shown and revised through touchable screen
- 3) Do not need to change any transmission part to change product's size
- 4) Machine can remotely controlled, change parameters according to client's request, can adjust the size of all raw materials
- 5) It can delete the difference of mechanical running in time and guarantee the qualified rate.

2. Detection system

- 1) Raw materials connection joint auto detection, auto rejection
- 2) Raw materials breaking auto alarm and auto stop
- 3) Lycra breaking auto detection and auto rejection
- 4) Detection switch shelf is convenient to adjust

3. Driving system

- 1) Single button starts up one by one to reduce the power network impact
- 2) Without blower start up and glue applicator start up, machine cannot start up. Also this function can be shield.

4. Unwinding and splicing

- 1) hydrophobic NW, hydrophilic NW, ADL, upper tissue paper, bottom tissue paper, bottom film adopt frequency converter A/B individual unwinding with auto splicing function.
- 2) Material diameter: bottom film ϕ 600mm, all the others ϕ 800mm. Core inner diameter 3 inches.
- 3) Unwinding is stable when splicing. Splicing can be automatic or by manual.
- 4) Splicing speed can be set on screen.
- 5) Splicing diameter can be precisely adjusted to save the material cost.

5. Material supplying control unit

- 1) It adopts Frequency converter to control wood pulp supplying amount. The supplying amount can be set on the touchable screen
- 2) SAP supplying adopts servo motor control, uninterrupted supplying. The supplying amount can be adjusted and shown on the touchable screen. Shortage alarm
- 3) Tension of lycra controlled by servo motor, it can set on touchable screen.

6. Operating touchable screen

- 1) Operating screen equipped on the middle of the machine, with Chinese and English program
- 2) Material shortage, joint, connection, Fan , Vacuum pump working state can show on the screen
- 3) The data of counting position, quantity can adjust on the screen
- 4) Working speed(piece/min), single producing output, monthly output, annual output, counting quantity and products' passing rate can show on the screen
- 5) The testing system for supplying amount of SAP and glue, lack or broken of all material switch on/off can show on the screen
- 6) All the switch of servo motors on/off, if some part no need working, it can tune off alone, so it can save electricity and extend the machine using time.
- 7) Remote control module , connect with mobile APP

7. Heating system

- 1) Temperature controlling system controlled by touchable screen, it can show the state for every part of temperature control system
- 2) Thermocouple control temperature system
- 3) High quality heating element
- 4) Conductive slip ring control the power and signal of temperature
- 5) Heating system adopts cylinder pressure, when machine stopped, all heating parts up automatically, when machine running, it returns again and it can be manual controlled independently

8. Safety unit

- 1) Machine equipped with safety door
- 2) Machine equipped with urgent stop button
- 3) Machine equipped with safety pull switch, ensure the safety for operators
- 4) Machine equipped with the unit for up speed, down speed, alarm button and the auto up speed button, it's easy for operating
- 5) Machine equipped with safety plate on the cutting parts
- 6) Machine equipped with repair lighting

9. Independent wire casing is set at the side of back transmission box, divided into strong and weak lines, neatly arrangement, with independent door.

10. Spray, scraping glue control system

- 1) Reasonable glue spray position reservation, glue tube go through from the hole on the top of machine into back transmission cabinet, then straightly come out from machine board, glue tube can be fixed in transmission cabinet to avoid rubbing with other parts
- 2) Matched with glue applicators, spraying automatically, when the machine stopping, it stopped automatically, also can be by manual control
- 3) Adopt with glue spray quantity manually tested function on touchable screen when machine is stopped
- 4) All glue break station unified controlled by system
- 5) Supply 0-10V DC tracking signal of glue applicators
- 6) Adopt with lights at glue sprayed position
- 7) Bridge type glue applicator assembly device

Note: Glue applicators are excluded in main machine and can be bought by clients or from us directly.

[Spare parts list](#)

Name	Quantity	Name	Quantity
Kit	1 set	fuse	10 pieces
All sizes cutter	Each size 1 set	transition wheel	3 sets
Cutting blade	2 pieces	Timing belt	3 pieces
Truncation blade	1 set	Conveying belt	2 pieces
thermocouple	2 pieces	Electric heater	5 pieces
Simple sealing machine	2sets	Simple packing machine	2sets
Blower wire	1set	Power cable	1set
Electrical schematic diagram	1	back transmission diagram in PDF	1
Instruction of main electrical elements	1	machine layout in PDF	1