

HY1600 Melt-blown Non-woven Fabric Making Machine

with single screw extruder HYSJ105/30

—— output 1.4~2ton/day

I .Overview

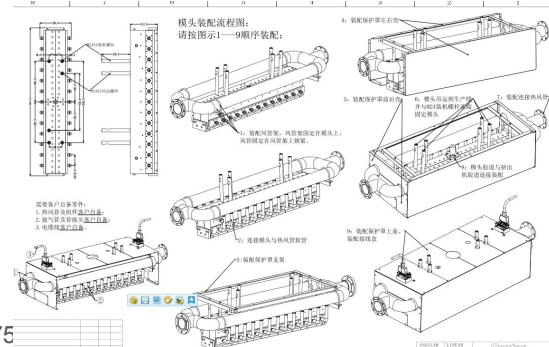
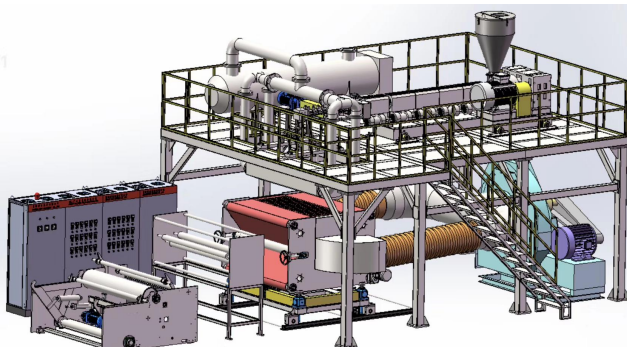
Melt-blown non-woven fabric is a one-step polymer production process with short process in nonwoven fabric production. The machines have many obvious advantages such as high filtration efficiency, low resistance, flexibility, and the network can self-bond and bond. The production line is widely used, it mainly used in the medium-efficiency and sub-efficient filtration, including air filtration, acid-broken liquid filtration, and food. hygienic filtration, production of industrial dust masks, etc., in addition, it can also be used in production of medical and sanitary products, industrial precision cloths, thermal insulation materials, oil-absorbing materials, battery separators, imitation leather base cloth, etc. In many ways, its performance is better than similar products of traditional textiles. With the continuous development of post-processing technology, the application fields of melt-blown non-woven fabrics will be more extensive.

II .Characteristics:

- ◇ The machine developed by Shenzhen HYPET Co., Ltd. uses the most advanced technology, a professional extruder with a large diameter and a large length-to-diameter ratio. Through die flow analysis, the flow path of the hanger head is balanced to ensure a balanced flow of pressure everywhere. The plate is made of special alloy stainless steel with special heat treatment to ensure no deformation. It is made by the most advanced technology of Taiwan linear motor drilling. The high-power air heater has high control accuracy, the network negative pressure forming control system has stable suction, and is qualified. The PP1500 meltblown special material and electret masterbatch, combined with experienced process operation technology, can ensure that the product is qualified and achieve a filtration accuracy of 95+.

The specific features are as follows:

- Adopt bigger grade extruder 105/30 (Other peers use SJ90/30 extruder) to ensure sufficient head pressure and output.
- The non-stop dual-station screen changer prevents the slag from being clogged and wastes time when the machine is replaced.
- The 150cc high-flow melt metering pump guarantees a stable and balanced pressure on the spinneret.
- Using special hanger type and gas pressure spinning die, the melt is evenly distributed.
- The air pressure of the air nozzle is stable, the airflow on both sides is symmetrical, and the airflow in the width direction is uniform.
- The air gap width is easy to adjust.
- The specially designed hot air flow heating device has ultra-high heating efficiency and excellent heat exchange efficiency, and low energy consumption.
- The receiving distance is adjustable, and the receiving form (flat net receiving and roller receiving) can be easily replaced.
- Fiber fineness and cloth surface are uniform.
- The electret treatment makes the melt-blown cloth have a good filtering effect.
- Online slitting and automatic cutting and winding machine



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三， 技术配置清单：

III. Condition of use

1. Circumstances condition

SN	Condition	Specification	Description
1	Natural circumstance condition	Working place	Indoor use, dust-free workshop
		Power source	No dangerous area
		Humidity	55%~85% no condensation
		Temperature	0~40 °C
2	Electricity source	Maximum installed capacity	550 kW
		Voltage/frequency	380V/50Hz/3 P
3	Cooling water	Temperature	≤15 °C
		Water pressure	≥0.3MPa
		Water volume	~15 m³/h
4	Air condition	Compressed air pressure	≥0.6MPa
		Compressed air flow	~0.9 m³/min, For equipment only

2. Production line use conditions

SN	Specification	Description	Remark
1	Raw material	MFI1200~1800 PP Melt-blown special materials + other electret master batch etc.	
2	Suitable products	Melt-blown filter materials, mask filter materials, etc.	
3	Max output	1.4-2 ton/day, Adjust according to the actual product	
4	Maximum mechanical speed	1-50 meter/min	
5	Product weight	15-80 g/m²	
6	Product width	1600mm	
7	Fiber fineness	2-5 um	

IV. Equipment List

NO.	Machine name	QTY	Specifications	Remark
1	Vacuum suction and dryer feeding system (full-automatic proportioning and feeding available)	1 set		
2	HYSJ105/33 PP Special single screw extruder	1 set	Motor power 55kw	
3	Automatic screen changing device	1 set	hydraulic control	Detected by

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				pressure sensor and send signal
4	Melt pump	1 set	100CC	
5	1600mm hanger-type melt-blowing head with spinneret, aperture 0.2-0.3mm, aspect ratio 12	1 set		
6	Air heater and its hot air system (this power is large enough, the design temperature is 400 degrees, and the temperature control accuracy is +/- 1 ° C)	1 set	Heating power 280kw	
7	Roots blower piping system	1 set	90kw Frequency Control	
8	Net forming machine and up, down, front and back adjustment system	1 set		
9	Suction fan and its piping system	1 set	75kw	
10	Electrostatic electret system	1 set		
11	Online slitting and automatic winder, with 12 slitting blades	1 set		
12	Production line frame structure	1 set		
13	Electronic control system	1 set		
14	Equipment for cleaning die of melt-blown non-woven fabric spinneret	1 set		
15	Tools and spare parts	1 set		

IV. Main specification:

1. Vacuum suction and dryer feeding system	
Vacuum suction specifications	400kg/h
Feeding height	4 meter
Dryer volume	300L
This kind of configuration can be used with the mixer easily and reliably	
2. HYSJ105/33 PP Special single screw extruder	
Screw diameter	105mm
Aspect ratio	33:1
Barrel screw material	38CrMoAl, Nitride steel
Screw hardness	>HV750
Barrel hardness	>HV930
Barrel heating area	6 areas
Total heating power	45kw
Motor	Inverter motor
Controller	ABB frequency converter
Gearbox	High-efficiency reducer with hard-tooth grinding
Gearbox specifications	250 horizontal
Box material	QT200-300

Thrust bearings	Domestic high-quality bearings
Cooling system	Independent cooling method of external circulation
Rotating speed	10-60rpm
Barrel periphery	With thermal protective cover stainless steel
Cooling fan	Taiwan powerful cooling fan
3. Screen changing device	
Structural form	Plate type, double station
Screen change driver	Manual and automatic
Heating type	Built-in heating tube
Temperature and pressure sensors	With dual display, Chengdu Xianda brand
4. Melt pump	
Control method	A pressure sensor is arranged in front of the melt pump, which is used to control the speed of the extruder in a closed loop, so as to control the output of the extruder to achieve a stable effect, and the pressure sensor behind the metering pump shows the output pressure.
Specification	100 cc
Motor	Famous brand, inverter motor
Controller	International brand, ABB
Motor power	5.5kw
5. 1600mm hanger-type melt-blowing head with spinneret	
Phantom discharge size	1700mm
Mold material	D2316
Heating area	26 areas
Heating power	18kw
Spinneret material	Special alloy
Spindle hole diameter	0.2-0.3mm
Wind tunnel	Each inlet branch is 13 branches
Tuyere adjustment	The size of the tuyere can be adjusted with an accuracy of microns
The spinneret transforms the solution into a fine flow through small pores, and the ultrafine fibers can be formed by high temperature and high speed air flow drawing, and the melt-blown non-woven fabric is formed by the irregular arrangement of the fibers.	
6. Air heater and its hot air system	
Heating power	280kw
Heating size	Φ 377x2770
Number of heating tubes	63 PCs
Liner and shell	304 stainless steel
Material of pipeline	Stainless steel
7. Roots blower piping system	
Blower power	90kw
Control method	ABB frequency controller
Pressure	80kpa
Rotating speed	1150rpm
Flow	42m ³ /min

Instructions: The air volume sent by the Roots blower passes through the air heater to reach the set temperature, and finally sent to the mold air duct.

8. Net forming machine and up, down, front and back adjustment system

Line speed	0-50m/min
Mesh belt width	1900mm
Net curtain material	High temperature resistant polyurethane, red color
Spinneret adjustment distance	80-300mm
Driving power	7.5kw

9. Suction fan and its piping system

Suction fan power	75kw
Suction air volume	18000-30000m3/min
Wind pressure	5 kPa

10. Electrostatic electret system

Input voltage	220v/50hz
Maximum output voltage	60kv
Processing width	1700mm

11. Online slitting and automatic winder

Winder control	Manual and automatic
Winding motor power	7.5kw
Line speed	0-50 m/min
Number of slitting knives	12 PCs
Air shaft	Paper tube core size 3 inches

12. Production line frame structure

	1 set
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13. Electronic control system

Operation screen	Siemens
PLC system	Siemens
Frequency converter	ABB
Low-voltage electrical appliances	Siemens / Chint / Famous Brand

14. Equipment for cleaning die of melt-blown non-woven fabric spinneret

Dry ice washing machine	1 set
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15. Tools and spare parts

Heating ring	1 PCs
Thermocouple	5 PCs
Screw removal tool	1 set
Contactor	2 sets
Slitting blade	2 PCs

V. Commercial terms (FOB)

No.	Item name	Qty	Unit price/usd	Total price/usd
1	HY1600 Melt-blown Non-woven Fabric Making Machine	1 set	700,000	700,000
Say Total US dollar SEVEN HUNDRED THOUSAND ONLY				

Payment terms:

50% prepaid, after the commissioning is passed, the final payment should be paid before delivery.

Delivery period:

25 days after receipt of advance payment.