

Leading the global wire and cable industry with intelligent manufacturing and new materials.

1、ADVANTAGE

	<p style="text-align: center;">ADVANTAGE</p> <ol style="list-style-type: none"> 1、 Competitive price 2、 No installation, no foundation, take model design including electrical wire 、 water pipe and air pipe . only connected can start to work because already test running before shipment. 3、 Local after sales service because shineworld set up aboard after sales office and has 4-5 local engineer. 4、 En-joyful buying because professional team
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2、 How to choose model

Cross Section	Material	Extruder Model	Extruder Speed	Coiler Speed	Printer Speed	Line Speed	
1.5-6 mm ²	PVC	70/80+1246	600-1000	350	500	200	
10mm ²	LSZH	80+1246					
1.5-10mm ²		80+1246					
10-35 mm ²	Copper	80/90+1860					
10-95 mm ²	Aluminum		600-1000		500	500	
1.5-6 mm ²	PVC	70/80					
10mm ² - 35mm ²	LSZH	80					
1.5-10mm ²		80					
10-35 mm ²	Copper	80/90					
10-95 mm ²	Aluminum						
10-240 mm ²		90					
50-630 mm ²		120					
5X240 mm ²		120					
5X630 mm ²		150					300-500

3、QUOTATION

SN	DESCRIPTION	QUANTITY	FOB SHANGHAI UNIT PRICE/USD	FOB SHANGHAI AMOUNT/USD
1	150 high speed Jacketing line Model: SW150	1.00SET	308, 000.00	308, 000.00
TOTAL:				308, 000.00

REMARK:

- 1, The detailed specification will be integral part of this quotation.
- 2, Price basis: Price are for delivery FOB shanghai, China according to INCOTERMS 2010. And the exchange rate for USD: RMB is 1:6.60. If the exchange rate is changed over 0.5%, the quotation will be adjusted accordingly even in the validity time.
- 3, Validity of quotation: the quotation is validly within 30 days after issue date.
- 4, Delivery period: the delivery time is 90 days after receipt of your down payment and clarification of all technical and commercial details. The agreed delivery period is subject to the punctual receipt by us of all equipment, documents approvals release and services to be furnished by buyer for the performance of the order.
- 5, The quotation is based china standard material and package.
- 6, The buyer should provide:
 - λ The water pipe, compressed air pipe used in site. And response to connect with the machine corresponding connectors.
 - λ All the Wire and cable between transformers to the electrical cabinets.
 - λ Installation.
- 7, The following are not included in the scope of our supply:
 - λ The preparation of the site with all the necessary foundation work and ceiling openings etc.
 - λ The connection cables from the mains to the switch unit and from this to the various motors and auxiliary units of our equipment.
 - λ The electrical installation including the required safety devices outside the machine and switch unit.
 - λ The connection pipes, gravity feed hoppers etc., between the various units supplied by us.
 - λ Any required frames, platforms, suspension devices, etc., the operation media such as oil, grease etc., as well as raw material for the stating up and operation.
- 8, The parties agree that any claim to compensation for loss of profit as well as for indirect damage and consequential damage, on the basis of whatever legal ground, are excluded. This shall not apply if legal.
- 9, All equipment and technical service technical training are expressly stated in our quotation.
- 10, All supervision of installation & commissioning charge (include visa cost, insurance, round tickets, subsidy worked in the buyer's factory; around 2-3 engineers include 1 project manager, worked around 1 months). But the buyer bears expenses of accommodation, local transportation, food, sim card & Wi-Fi for the seller's engineers for installation commissioning & technical training. Because of COVID-19, these cost will be charged separately.

- 11, all the bank charge is paid by buyer .
- 12, all the options device is not included in the above offer.

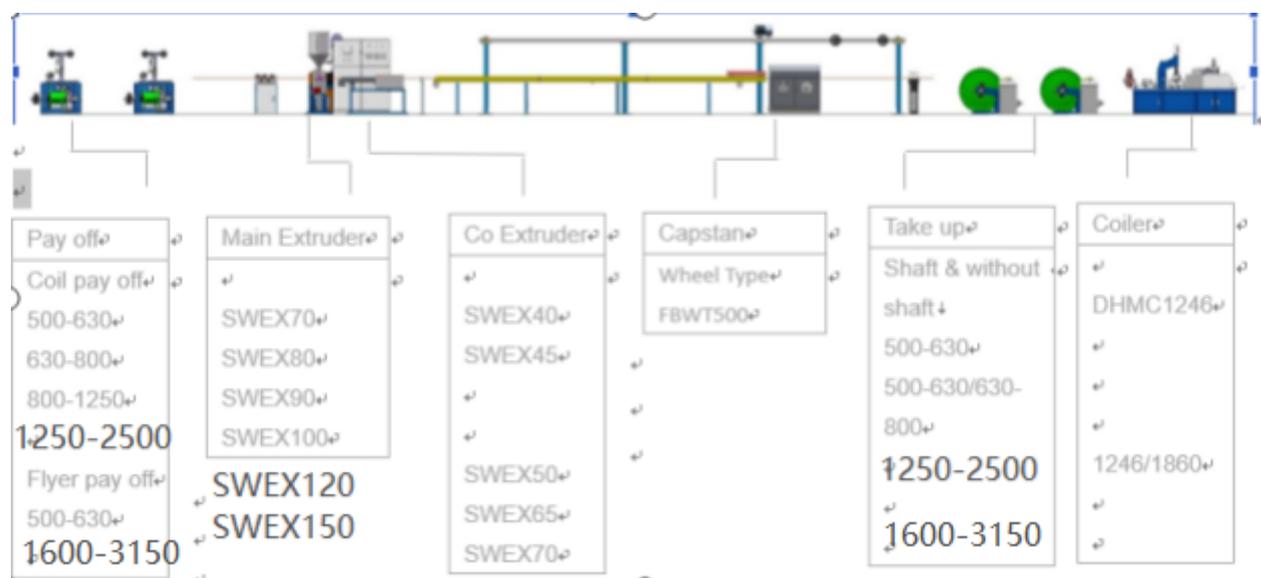
4、SPECIFICATION

SW 150 high speed Jacketing line

4.1. General description

This machine is used for PVC, XPLE, HFFR cable insulation and sheathing extrusion, mainly use for flexible cable/hard wire/building wire/housing wire/power cable.

4.2. Product lay out drawing Line direction



4.3、 Main Technical Parameter

4.3.1	Process materials		XLPE	HFFR	PVC
4.3.2	Line speed	6-40m/min			
4.3.3	Screw rotate speed	0-65RPM/min			
4.3.4	Maximum extruding capacity	PVC:1200kg/h ±5% ; XLPE: 800kg/h ±5%			
4.3.5	Max output	1 screw for 150	800kg	900kg	1200kg
4.3.6	Motor Power				250kw
4.3.7	Conductor size range	Φ25mm-Φ130mm			

4.3.8	Cross section area(mm ²)	HV , MV, LV Jacketing
4.3.9	Finished cable diameter	Φ30mm-Φ140mm
4.3.10	Applicable cable type	jacketing
4.3.11	Axis cable height	1000mm
4.3.12	Voltage	3 phase -5 wires. AC380/415V (±10%),-50/60HZ, according to customer's standard.

4.4、 Production line specification

SN	Item	Technical data	
4.4.1	Line direction(based on customer's requirements)	A. Left pay off , Right take up or B. Right pay off , Left take up	
4.4.2	Coating Color	machine body	RAL5015
		Rotation parts	RAL2004, orange
		Electrical cabinet	RAL7035
4.4.3	Consumption	Power consumption	330kw
		Water consumption	Circulation
		Air consumption	20m ³ /h
4.4.4	Bobbin	Take up	Pay off
	Flange	PN1600-3150mm	PN1250-2500mm
	Barrel	800-1900	800-1900
	Bobbin width	1180-2300	1180-2300
	Traverse width	1000-2000	1000-2000
	Bobbin Bore	80 -160	80 -160
	Bobbin Material	Steel	Steel
4.4.5	Lubricant	220# for all gear box	
4.4.6	Electrical control cabinet	PLC+HMI	
4.4.7	Engine	2 workers for one line	
4.4.8	Heating	Heating/cooling zone	6
		Heating power	84kw
4.4.9	Cooling system	Material	SUS 304
		Type	Single layer
			Single Spraying
4.4.10	Caterpillar	2*15KW, frequency motor	

4.4.11	The water trough length	4+28m single layer
4.4.12	Take up	15KW, frequency motor
4.4.13	Operator	1 or 2 Operator
	Maintenance duration	Every structure of the shafts ,chained wheels and chained piece should add Ca n°3 lubrication, one time per month
		Bearings of the idler pulley should add Ca n°2 lubrication grease every three months
4.4.15	Complete set of production-line installation length of the	45-50 meters

4.5、Electrical Technical Parameter

4.5.1	Making Norm	EN 60204
4.5.2	Safety level	EN954-1
4.5.3	Working voltage	AC380/415V (±10%),-50/60HZ,
4.5.4	Power frequency	50/60HZ ±1%
4.5.5	Voltage fluctuation	-10% +5%
4.5.6	Zero wire	3 phase with neutral ,without earth
4.5.7	Control voltage	24V DC
4.5.8	Solenoid Valve Voltage	24V DC
4.5.9	Lamp Voltage	24V DC
4.5.10	Cabinet inlet	According to customer's standard
4.5.11	Power supply	According to customer's standard
4.5.12	Control	Main switch SIEMENS 3VT type
4.5.13	Driven	SIEMENS, all closed loop control
4.5.14	Environment Temp	10-40℃
4.5.15	Air humidity	DIN 40040 F level
4.5.16	Assemble height	Till 1000mm
4.5.17	Heating Resistance zone insulation instruction	NO
4.5.18	Electrical control cabinet	Electrical control cabinet

4.6、Configuration

4.6.1、Main configuration

No	QTY	Unit			
4.6.1.1	1	set	PN2500mm portal type pay off	Mechanical tension	

4.6.1.2	1	set	3200kg belt type caterpillar	3200kg	
4.6.1.3	1	set	150 Main extruder with loading system	150-25D	
	1	Pcs	screw for PVC and PE		
4.6.1.4	1	set	Small crosshead(Adjustable type)	Input:25mm to 90mm Output:30mm to 100mm	
4.6.1.5	1	set	Big Crosshead(Adjustable type)	Input: 45mm to 130mm Output: 50mm to 140mm	
4.6.1.6	1	set	32m Stainless steel water trough	Moveable+ single layer	
4.6.1.7	1	set	Meter counter-China brand-Optional 1	Mechanical & Electrical Accuracy: $\leq \pm 3\%$	
4.6.1.8	1	set	3200KG belt type caterpillar	3200KG	
4.6.1.9	1	set	PN3150mm portal take-up	1600 ~ 3150mm	
4.6.1.10	1	set	Electric control system		
4.6.1.11	1	set	Spark tester-Online brand-Optional 1	Max. dia. 95mm	
4.6.1.12	1	set	Laser Diameter Gauge-online brand-Optional 1	Max. dia. 95mm	

4.6.2、 Parts list
4.6.2.1.Motors and Inverter

	Motor Type/Power	Inverter Type/Power	Manufacture
PN1250-2500 portal Pay off	5.9KW AC	Siemens or Yaskawa	Siemens Beide
3200kg caterpillar	15kw AC	Siemens or Yaskawa	Siemens Beide
Main extruder 150mm	250kw AC	Siemens or Yaskawa	Siemens Beide
3200kg caterpillar	15kw AC	Siemens or Yaskawa	Siemens Beide
PN1600-3150mm portal take up	15kw AC	Siemens or Yaskawa	Siemens Beide

4.6.2.2.Other

	Manufacture		
Gear box	Chinese famous brand		
Main Low-voltage components	Schneider and Chinese famous brand		
PLC (all)	SIEMENS S7-1200		
Touch screen	Siemens or MCGS		
Temperature unit	RKC		
Solid relay	Fotek or Chinese famous brand		

4.7. Specification for the main components (Scope of supply Specification)

4.7.1.PN1600-3150mm portal type pay off

	Name of product	Type/None			
4.7.1..1					
4.7.1.2	Bobbin size:	PN1250-2500mm			
4.7.1.3	Motor:	1.5KW AC Motor + reducer driving			
4.7.1.4	Loading/unloading	2.2KW AC Motor + reducer driving			
4.7.1.5	Clamping	2.2 KW AC Motor + reducer driving			
	Brake	Pneumatic			
	Applicable cable Dia.	Φ20-150mm			
	Max. loading	15T			
	Bearing:	Chinese brand			
4.7.1.6	Tension: Mechanical tension and adjustable				

	Portal self-traverse type Payoff is made of steel construction and has strong body.
	Pintle open-close motion is made by AC motor
	Towers will be able to move both side separately or together
	The payoff device uses portal type and ground rail moving, upper of device is sleeve type, the body is bent and welded to the frame. Two pintle thimbles of the both side are driven by two motor through cyclical reducer to screw nut, and can move together or alone, with mechanical and electrical dual protection, operator can change the pintle for different section reel when necessary.



4.7.2 3200KG front belt type pneumatic caterpillar

4.7.2.1	Max Force	3200kg
4.7.2.2	Cable size	Φ20-160mm
4.7.2.3	Qty of cylinders	9 pairs
4.7.2.4	Working length	2400mm
4.7.2.5	Width of caterpillar belt	140mm
4.7.2.6	Machine center height	1000mm
4.7.2.7	Driving motor	15KW SIEMENS motor
4.7.2.8	Motor control	SIEMSN G120 converter
4.7.2.9	Transmission	Motor with gearbox reducer

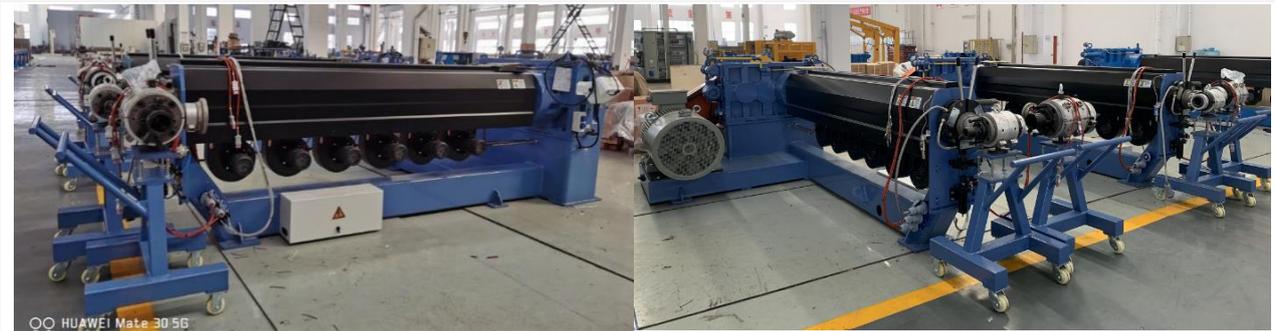
4.7.2.10	Total pressure	7.3 kg (6 BAR)
4.7.2.12	Top bottom flat belt haul off, compression and tension by air actuation.	
	Entrance and exit equips with wire guide rollers.	
	Main electrical panel and suspended control panel are on the machine.	
	Electrical components will be SIEMINS and Schneider.	
	Overall dimension : 3800x1200x1750 mm	



4.7.3 EX150*25 High speed extruder

4.7.3.1	Screw data	
	Diameter	150mm
	Length-diameter Ratio:	25: 1
	Screw structure	New BM type, suitable for XLPE,PVC
	Screw material	SACM645(from Japan)TAIWAN manufacturer.
	Max speed	0-65RPM
	Screw rigidity	reach HV950
	Material	38CrMoALA with nitriding treatment,
	Output with PVC	PVC:1200kg/h ±5% ;
	Output with XLPE	XLPE: 800kg/h ±5%
	Output with HFFR	HFFR:900kg/h.
	Screw cooling	center hole water cooling.
4.7.3.2	Barrel data	

	N. of heated/cooled zones	6
	Heating power for each zone	6KW
	Total heating power	36KW
	Material	38CrMoAlA, nitrogen treatment;
	Barrel rigidity	reach to 1000HV
	Temperature adjustment up to	is 300°C, precision is within±2°C
	Heating system	electric resistances
	Cooling system	Body feeding zone of barrel is cooling by water.
	Barrel is equipped with pressure sensor and blasting switch. Connected with cross head by flange.	
	4 section heating system for extruder head and die.	
	One spare heating control system for heating system.	
4.7.3.3	Electric parameters	
	Driven motor	250KW , Siemens AC motor
	Barrel cooling electric fan	1.5KW, flow rate:1740m ³ /hr
	Temperature controller	RKC
4.7.3.4	Others	
	Gearbox	nodular cast iron
	Gear	20CrMnTi with nitriding treatment,
	Gear with quenching treatment、nitriding and grinding treatment. Gearbox has hard surface gear teeth, forced oil lubricating (model: 280)	
4.7.3.5	Hopper & Loading system	
	Dryer capability:	500kg
	Loading capability	1300kg/h
	Material	stainless steel container
4.7.3.6	Hopper loader made up of stainless steel plate, placed on the material inlet zone, provided with gates, material level controlling lamp and minimum level alarm.	



4.7.4 Cross head

4.7.4.1	100mm (smaller crosshead)	Input: $\Phi 25 \sim \Phi 90$ mm Output: $\Phi 30 \sim \Phi 100$ mm
4.7.4.2	140mm (bigger crosshead)	Input: $\Phi 45 \sim \Phi 130$ Output: $\Phi 50 \sim \Phi 140$ mm
4.7.4.3	Installed with vacuum system;	Fan: 2.2KW, 1500rpm
4.7.4.4	Installed with vacuum system;	1. 3x300mm with armoring diameter of 83-84mm and required sheath thickness of 3.10mm. Running line speed: 13-15m/min
		2. 3x400mm with armoring diameter of 90mm and required sheath thickness of 4.20mm. Running line speed: 7-9m/min
		Based on the customer should guarantee that the raw materials should be international brand and completely new materials, not recycling materials.
4.7.4.5	Heating type:	outer heating mode.
	The head is equipped with vacuum pumping: vortex fan, motor power 1.1kw, 1500rpm	
	The main characteristics	Single layer



4.7.5 Diameter gauge

4.7.5.1	Model	DDM-2100L
4.7.5.2	Measurement range	Φ20 ~ Φ100mm
4.7.5.3	Recommend measurement range	Max 90mm
4.7.5.4	Measurement precision	+/-0.003
	Measurement resolution ratio	0.001mm
4.7.5.5	Overall dimension	440*100*100(without support)
	Centering height	1000mm
	One-way diameter measurement.	



4.7.6. 4m primary moving water trough and tank

4.7.6.1	4m primary moving water trough and tank	
4.7.6.2	Suitable for wire diameter	Max150mm
4.7.6.3	Centering height	1000mm
4.7.6.4	Material	SUS304 stainless steel
4.7.6.5	Total length	4m movable water trough+0.4m ³ hot water heating tank
4.7.6.6	Moving range	500mm
4.7.6.7	Cooling way	For spray and water immersion, with wire hold trough

4.7.7. 28m Single layer fixed water trough

4.7.7.2	Suitable for wire diameter	Max 150mm
4.7.7.3	Centering height	1000mm
4.7.7.4	Dimension	U type: 400×380x2.5mm
4.7.7.5	Material	SUS304 stainless steel
4.7.7.6	Total length	28m
4.7.7.7	Cooling way	For spray and water immersion, with wire hold trough. Stainless steel U-type single layer water tank;
	Blow type	Multi-head claw-type blow-drying of the blow-drying head, which is placed in the stainless steel box and connected to the water tank.
	Drying type	has several claws, put at stainless steel box and to be connected with water trough.
	with drying air blower and vortex pump.	
	Water trough is equipped with lead cable moving device.	
	There are supporting guide wheels inside, and guide wheels need to be added before and after each section of water tank. All water tanks ensure that the cable is submerged in water.	

4.7.8. Meter Counter

4.7.8.1	Suitable cable Dia.:	Max.Φ150mm;
4.7.8.2.	Length	0~9999m
4.7.8.3	Accuracy	≤±3‰



4.7.9. Spark tester

4.7.9.1	Model	ST-25A
4.7.9.2	Dia. range	Φ20-95 mm;
4.7.9.3	Voltage:	0-25.0KV
4.7.9.4	Accuracy	≤±3‰
4.7.9.5	Detection sensitivity	<600uA
4.7.9.6	Detection resolution	0.05s
4.7.9.7	Max detection speed	300m/min
4.7.9.10	Conform to Japan, the United States, European countries standard or the Great Wall of China certification;	



4.7.10. 3200kgs Belt type Pneumatic caterpillar

4.7.10.1	Max force	3200kg
4.7.10.2	Max speed	400m/min
4.7.10.3	Cable size	Φ20-160mm

- 4.7.10.4 Qty of cylinders 9 pairs
- 4.7.10.5 Working length 2400mm
- 4.7.10.6 Width of caterpillar belt 140mm
- 4.7.10.7 Driving motor 15KW SIEMENS Beide motor
- 4.7.10.8 Motor control SIEMSN G120C converter
- 4.7.10.9 Transmission Motor with gearbox reducer
- 4.7.10.10 Total pressure 7.3 kg (6 BAR)
- 4.7.10.11 Top bottom flat belt haul off, compression and tension by air actuation.
Entrance and exit equips with wire guide rollers.
Main electrical panel and suspended control panel are on the machine.
Electrical components will be SIEMINS and Schneider
Overall dimension : 3800x1200x1750 mm
caterpillar with different speed option- four steps.


4.7.11. PN1600-3150mm dual-bobbin take up & traversing stand

4.7.11.1	Max design speed	40m/min
4.7.11.2	Suitable wire OD.	Max 160mm
4.7.11.3	Suitable bobbin size	PN1600-3150mm
4.7.11.4	Motor	15KW Siemens AC motor
4.7.11.5	Control	15KW inverter
4.7.11.6	Max. loading weight	18T

4.7.11.7	Portal stand moving motor	2.2KW AC Motor + reducer driving
4.7.11.8	Bobbin lifting motor	2.2KW AC Motor + reducer driving
4.7.11.9	Bobbin clamping motor	1.5KW AC Motor + reducer driving
4.7.11.10	Traverse motor	1.0kw Mitsubishi AC servo motor.
4.7.11.11	Portal rail type structure, reel lifting, clamping or relaxing is by motor.	
	Pintle open-close motion is made by AC motor.	
	Main electrical panel and suspended control panel are on the machine.	
	Electrical components will be SIEMINS and Schneider.	
	Take-up motor is AC motor, controlled by SIEMENS drive. Take-up tension is stable and adjustable.	
	Take up moves for traversing, driven by AC motor, frequency inverter control, traversing speed follows take-up speed, traverse pitch is step-less. Portal take up has fast traversing function.	
	Take up has reel closing protection, reel loading and unloading limit protection, and side way movement limit protection.	
	Included take up control dancer, tension range: 50-300N adjustable. Structure: Swing pole structure, tension is controlled by potention meter.	



4.7.12. Electrical control system

4.7.12.1	Control system overview	
	The whole production line is combined controlled by Siemens PLC S7-1200 Serial and MCGS 12' colorful touch screen. With arm panel.	
	Control cabinet	Rittal design, painted colors RAL 7035
	Cabinet size	L(4000)*H(2000)*W(500)mm
	Cable inlet	Main power supply cables and all extruder cable entering from the bottom; All other part's control and power cable enter from the top.
	Power supply three phases	AC 380V 50Hz
	Low control power supply	AC 220V 50Hz
	Lamps, buttons, sensors	24 Vdc
4.7.12.2	Auxiliaries circuits brands	
	Motors	SIEMENS Beide brand
	Drivers	SIEMENS or Yaskawa
	PLC + HMI	SIEMENS or MCGS
	From the most recognized international brands: Schneider or Chinese famous brand	Main circuit breaker, Contactors, Auxiliary relays, Safety gates control block, Push buttons (Ø 22 mm), Proximity switches, Limit switches, Terminals, Encoders, Lamps
4.7.12.3	Control Function Description	
	Operation	Manual, Synchronous or automatic mode
	Main PLC	Connect with drivers and HMI by profinet; It takes all the controls and inspections of the whole line, provides strong and complete control capabilities
	Main HMI	HMI for all single part; HMI for all production data; HMI for Alarm message; HMI for control when button broken; HMI for maintaince; HMI for production monitor
	Alarm information	Motor driver fault; Cooling fan overload; Motor fan overload; E-stop alarm; Wire OD. Overflow alarm;
4.7.12.4	PLC Siemens S7-1200 connected in Profinet with external and internal components as drives, video-keyboard, and remote PLC, or any other.	
4.7.12.5	Safety relays for emergency kept electro-mechanical outside the PLC.	
4.7.12.6	Operator panel, to be fit in a suitable position close to the drawing machine, with all push buttons and lamps needed for the easy and correct use of the line supplied with a HMI Display.	

4.7.12.7	The software used is custom made to suit all needs for an easy use by the operator or by the technician.
4.7.12.8	Cooling fan is controlled by the temperature control meter to make the temperature curve straight.
4.7.12.9	The counter receives the pulse signal sent by the meter counter. The ratio of code length to pulse number can be adjusted freely, which can count the length conveniently and accurately. At the same time, it also has the meter prediction function to make the operator more comfortable.
4.7.12.10	Automatic process control: operated by touch screen and assisted by buttons.



5、 SPARE PARTS

SN	Description	Qty.
5.1	Barrel heater for EX150 Crosshead heating circle and rod	1Set
5.2	Thermocouple	1pc each model
5.3	Solid relay	1pc each model
5.4	Auxiliary relay	2pcs

5.5	Crosshead wrench	1pc
5.6	Inner hexagon wrench	1set
5.7	Monkey wrench	1pc
5.8	Slot type screwdriver Cross screwdriver	1pc each model
5.9	Tool box	1pc
5.10	Foundation screw and fixed screw	1set
5.11	Honeycomb sample	1pc
5.12	Whole machine V-BELT	1
5.13	Whole machine synchronous belt	1
5.14	Pneumatic clamp rubber	2
6、ENGINEERING DOCUMENTS		
6.1	Lay-out drawing in printed and CAD Version	1 set for each
6.2	foundation drawing in printed and CAD Version	1 set for each
6.3	Operation Manual in printed & digital copy	1 set for each
6.4	Sourcing Equipment Operation Manual	1 set for each
6.5	Electric Drawing in Digital and Printed Copy	1 set for each
6.6	Wire Diagram list in Digital	1pc
6.7	Maintenance Plan	1set
6.8	Certification of Test Equipment	1pc

SHANGHAI SHINEWORLD ENGINEERING CO., LTD.

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