

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

1、ADVANTAGE



ADVANTAGE

- 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

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						
1.5-6 mm ²	PVC	70/80	600-1000		500	500	
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	80+45 high speed insulation line Model: SW 80+45	1.00SET	73,277.00	73,277.00
TOTAL:				73,277.00

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 30 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.

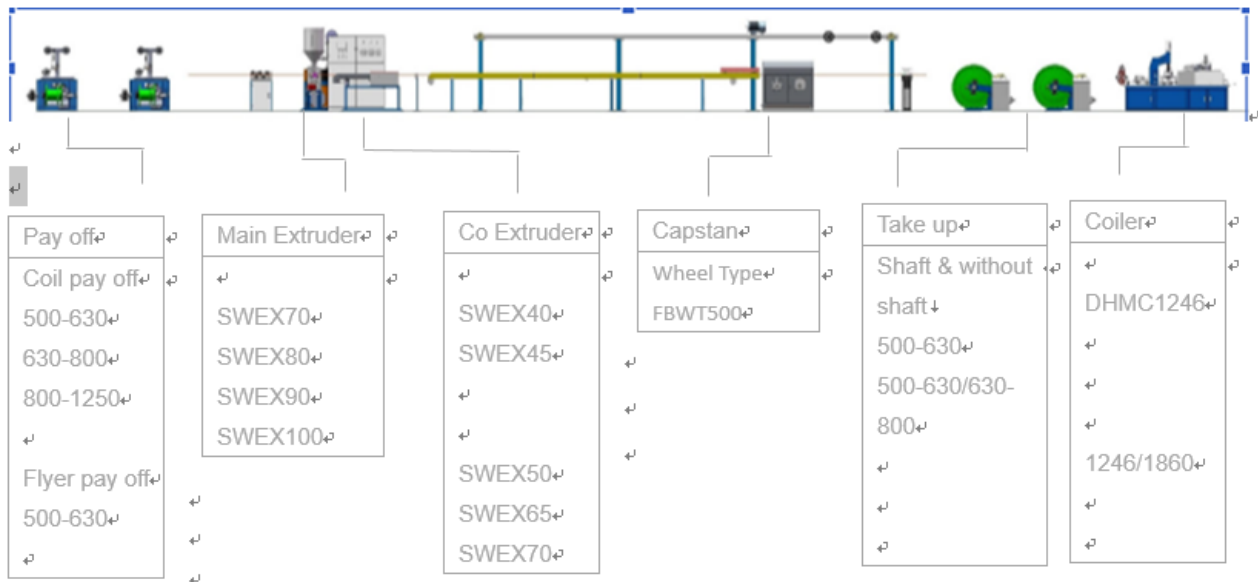
4、SPECIFICATION

SW 80+45 high speed wire insulation line

4.1. General description

This machine is used for PVC and PE cable high speed insulation extrusion, mainly use for flexible cable/hard wire/building wire/housing wire/power cable. It can product one color fill, two colors stripe/skin insulation cable.

4.2. Product lay out drawing Line direction



4.3、 Main Technical Parameter

4.3.1	Process materials			XLPE	LSZH	PVC
4.3.2	Line speed	0 ~ 350m/min (1.5mm ² ---350m/min)				
4.3.3	Screw rotate speed	0 ~ 110r/min				
4.3.4	Maximum extruding capacity	PVC:230kg/h				
	Size	Conduct or OD	Thickness mm	Finished OD	XLPE SPEED	LSZH SPEED
	0.75mm ² /0.97	0.97	0.4	2.1-2.5		
	1.0mm ² /1.13	1.13	0.4	2.2-2.7		350m/mi

						n
	1.5mm ² /1.38	1.38	0.6	2.6-3.2		320m/min
	2.5mm ² /1.78	1.78	0.6	3.2-3.9		240m/min
	2.5mm ² /19x0.41	1.78	0.6	4.2		238m/min
	4.0mm ² /2.25	2.25	0.8	3.6-4.4		152m/min
	4.0mm ² /19x0.52	2.25	0.8	4.8		150m/min
	6.0mm ² /2.76	2.76	0.8	4.1-5.0		130m/min
	6.0mm ² /19x0.64	2.76	0.8	5.6		130m/min
	10mm ² /7*1.35	3.56	0.8	5.6-6.7		100m/min
	10mm ² /84*0.4	3.56	0.8	7.6		100m/min
4.3.5	Max output		1 screw for 80	200kg	120kg	220kg
			1 screw for 45	30kg	25kg	50kg
4.3.6	Motor Power			45 Kw	45 Kw	45Kw
4.3.7	Conductor size range	compacted & flexible copper conductor Min 0.75mm ² to max 10mm ² for insulation process, Input Dia. (mm) Φ0.97 ~ Φ3.56 mm				
4.3.8	Cross section area(mm ²)	0.75-10	Cross head size	U14		
4.3.9	Finished cable diameter	0.75mm ² to 10mm ² (single round core) Output Dia.(mm) Φ2.1-7.6mm.				
4.3.10	Applicable cable type	Insulation & 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	90KWh
		Water consumption	Circulation
		Air consumption	5m ³ /h
4.4.4	Bobbin	Take up	Pay off
	Flange	PN630-800mm dual bobbin type	PN600-PN800mm for motorized frame
	Bobbin width	475-600mm	475-600mm
	Traverse width	400-620mm	
	Bobbin Bore	80mm	80/127mm
	Bobbin Material	Steel	Steel
4.4.5	Lubricant	220# for all gear box	
4.4.6	Electrical control cabinet	PLC+HMI	
4.4.7	Operator	One worker for one line	
4.4.8	Heating	Heating/cooling zone	4
		Heating power	15
4.4.9	Cooling system	Material	SUS 304
		Type	Single layer, or Double layer , or Single Spraying
4.4.10	Capstan	Max .1000N	
4.4.11	The water trough length	4m movable +8m single layer	
4.4.12	Take up	15 - 180N (+/-10%)	2000kg
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 25 to 28 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°C
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	2	sets	PN630~ PN800mm pay off	with magnetic powder tension
4.6.1.2	1	set	Powder machine	for multi-core cable
4.6.1.3	1	set	winding step	
4.6.1.4	1	set	Straightening table	Φ100mm
4.6.1.5	1	set	High speed extruder	EX80
4.6.1.6	1	set	Material Uploading Dry unit	(PVC,XLPE as Extruding Material)
4.6.1.7	1	set	Strip/skin Injecting extruder	EX45 Horizontal type
4.6.1.8	1	set	high-speed printer	Xinhua(Taiwan brand) ink

4.6.1.9	1	set	Cross head	Auto- centering U14	
4.6.1.10	1	set	Diameter gauge	Chinese famous brand 3025	
4.6.1.12	1	set	Front long warm water launder		
4.6.1.13	1	set	stainless steel cooling trough	8m single layer	
4.6.1.14	1	set	Horizontal accumulator	12m	
4.6.1.15	1	set	Φ600 dual wheel capstan	Dual wheel type	
4.6.1.16	1	set	Spark tester	15KV-Chinese famous brand	
4.6.1.17	2	sets	cantilever take up	PN630-800mm	
4.6.1.18	1	set	Electric control system	Automatic by PLC+HMI	

4.6.2、 Parts list
4.6.2.1.Motors and Inverter

	Motor Type/Power	Inverter Type/Power	Manufacture
PN630-800mm Pay off	0.75kw	China famous brand	China famous brand
Main extruder 80mm	45Kw AC	Siemens or Yaskawa	Siemens Beide
Co-extruder 45mm	11Kw AC	Siemens or Yaskawa	Siemens Beide
Capstan	5.5Kw AC	Siemens or Yaskawa	Siemens Beide

4.6.2.2.Other

Parts name	Manufacture		
Gear box	Chinese famous brand		
Main Low-voltage components	Schneider and Chinese famous brand		
PLC (all)	SIEMENS S7-200 smart		
Touch screen	Siemens or MCGS		
Temperature unit	RKC		
Solid relay	Fotek or Chinese famous brand		

Industry computer	Optional	
Dezentrale peripherie	Optional	
Tel service	Optional	
Industry Air conditioner	Optional	

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

4.7.1.PN630-800mm with magnetic powder tension

	Name of product	Type/None			
4.7.1..1	Speed	Max:400m/min			
4.7.1.2	Bobbin size:	PN500- PN630mm			
4.7.1.3					
4.7.1.4	Loading/unloading	Motor driving with electrical control			
4.7.1.5	Clamping	Pneumatic			
4.7.1.6	Tension: 10 kg magnetic tension and adjustable				



4.7.1 .PN630-1000mm with magnetic powder tension

	Name of product	Type/None			
4.7.1..1	Speed	Max:400m/min			
4.7.1.2	Bobbin size:	PN630- 800mm			
4.7.1.3	Motor:	0.75KW, special motor			
4.7.1.4	Loading/unloading	Motor driving with electrical control			
4.7.1.5	Clamping	Pneumatic			
4.7.1.6	Tension: 10 kg magnetic tension and adjustable				

4.7.2 Five wheel straightening device

4.7.2.1	straight wheel group: vertical wheel group (2 upper and lower 3).
4.7.2.2	Tool box type : there are 3 layers, where tool can be putted.
4.7.2.3	Application wire diameter:Φ1 ~ Φ6mm
	straight wheel groove shape, "U" shaped groove (bottom width 0 ~ 15mm adjustable) straight wheel: material S45C, hardening and quenching , grinding, coating ard chrome,The way to adjust: regulating according to wire diameter.



4.7.3 EX80 High speed extruder

4.7.3.1	Screw data	
	Diameter	80mm
	Length-diameter Ratio:	26: 1
	Screw structure	PVC-BM
	Max speed	100RPM
	Screw rigidity	reach HV950
	Material	38CrMoAIA, nitrogen treatment; (Nitride depth:0.6)
	Output with PVC	≤220KG/H
	Output with XLPE	≤220KG/H
4.7.3.2	Barrel data	
	N. of heated/cooled zones	4
	Heating power for each zone	4.5KW

	Total heating power	18KW
	Material	38CrMoAlA, nitrogen treatment; (Nitride depth:0.6)
	Temperature adjustment up to	350 ($\pm 1^{\circ}\text{C}$) $^{\circ}\text{C}$
	Heating system	electric resistances
	Cooling system	air flow with electro fans
4.7.3.3	Electric parameters	
	Driven motor	AC motor 45Kw , Siemens AC motor
	Barrel cooling electric fan	250W/AC380V
	Temperature controller	RKC
	Others heated zones	1 zone for flange; 1 zone for neck; 1 zone for mold
4.7.3.4	Others	
	Gearbox	nodular cast iron
	Gear	Gearbox built up with helical toothed gears in Ni Cr steel, casehardened and ground.
	Gear lubrication	Oil feed forcibly by gear
	Clamps	The machine is composed by a heated clamp having manual closing to be coupled to the crosshead.
4.7.3.5	Hopper & Loading system	
	Dryer capability:	200kg/h
	Loading capability	300kg/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 EX45 Vertical stripe/skin injector

4.7.4.1 Screw data		
Diameter	45mm	
Length-diameter Ratio:	25: 1	
Screw structure	BM	
Max speed	110RPM	
Screw rigidity	reach HV950	
Material	38CrMoAIA, nitrogen treatment; (Nitride depth:0.6)	
Output with PVC	≤50KG/H	
Output with PE	≤30KG/H	
4.7.4.2 Barrel data		
N. of heated/cooled zones	3	
Heating power for each zone	2.1KW	
Heating power	AC380V 50Hz	
Total heating power	7KW	
Material	38CrMoAIA, nitrogen treatment; (Nitride depth:0.6)	
Temperature adjustment up to	350 (±1°C) °C	
Heating system	electric resistances	
4.7.4.3 Electric parameters		
Driven motor	11 Kw dedicated AC variable frequency motor.	
Temperature controller	RKC	
Others heated zones	2 zones for neck	
4.7.4.4 Hopper & Loading (manual)		
Hopper loader made up of stainless steel plate, placed on the material inlet zone, material is feeding by manual.		



4.7.5 Crosshead

4.7.5.1	Model	U14
4.7.5.2	The main characteristics	Single color, Double layer, Striping coloration
4.7.5.3	Obstruction disk	For Skin / without Skin Double Stripping Single Stripping (30%)
4.7.5.4	Fix and Centering	Self-acting
4.7.5.5	Inlet wire range	0.8-8mm
4.7.5.6	Finished wire range	1.5-10mm
4.7.5.7	Heating	1 heating zone AC220V
4.7.5.8	All strategic parts are made of nitrated steel with all parts contact with the melt flow material carefully polished to achieve an excellent streamlined flow	
4.7.5.9	Melt flow distributor suitable for the most common materials: PVC, PE, HFFR	



4.7.6. Diameter gauge

4.7.6.1	Model	DDM-3020
4.7.6.2	Measurement range	Max. OD 16mm
4.7.6.3	Recommend measurement range	Φ0.2 ~ Φ12mm
4.7.6.4	Measurement precision	+/-0.003
4.7.6.5	Measurement resolution ratio	0.001mm
4.7.6.6	Overall dimension	440*100*100(without support)
4.7.6.7	Centering height	1000mm

4.7.7. Ink printer

4.7.7.1	Dia. range	Φ0.75~Φ12mm;
4.7.7.2	Max line speed	350m/min
4.7.7.3	Power	AC220V 50Hz
4.7.7.4	Ink print wheel size	OD. 100mm, inner bore Φ20mm, Max width 25mm
4.7.7.5	Oil ink cartridges	Cast aluminum, equipped with a random 2
4.7.7.6	Center height	1000mm, up-down adjustment
4.7.7.7	Printing quality conform to	UL, CSA, VDE, JIS, T-MARR series of standards

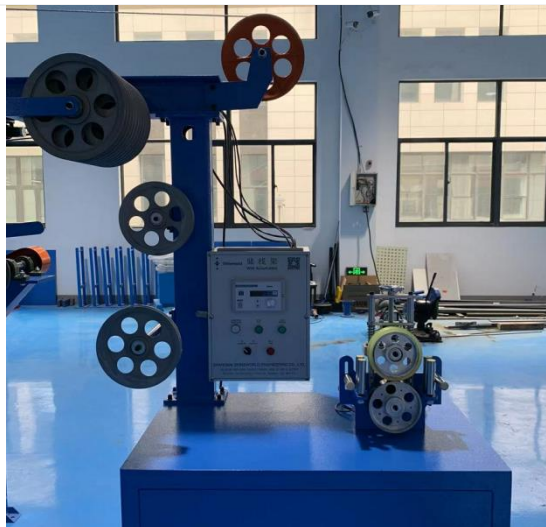
4.7.8. Cooling trough		
4.7.8.1	2m primary moving water trough and tank	
	Suitable for wire diameter	Max 10mm
	Centering height	1000mm
	Dimension	U type: (H)140*(W)150
	Material	SUS304 stainless steel
	Total length	2m
	Moving range	Max 500mm
	Cooling way	For spray and water immersion, with wire hold trough
4.7.8.2.	Single layer fixed water trough	
	Suitable for wire diameter	Max 8mm
	Centering height	1000mm
	Dimension	U type: 160mm * 160mm * 2mmt,
	Material	SUS304 stainless steel
	Total length	8m
	Cooling way	For spray and water immersion, with wire hold trough
4.7.9. Horizontal accumulator		
4.7.9.1	Motor	3HP * 4P AC motor + reducer 20Kg
4.7.9.2	Tension control	20KG-magnetic powder clutch
4.7.9.3	Capacity	Max. 240m
4.7.9.4	Accumulator wheel size	Φ300mm
4.7.9.5	Material of wheel	Aluminum alloy

4.7.9.6	Numbers of wheel	10:11
4.7.9.7	Wheel trough deep	H=12mm
4.7.9.8	Wheel trough width	S=14mm
4.7.9.9	It is feed backed to take up motor controller by potential detector. The speed of take up speed up automatically when accumulated wire capacity is bigger. Otherwise, the speed of take up slow down automatically when accumulated wire capacity is less.	
4.7.9.10	Control Box: Located at the place where the reservoir line into the round, control: under 1.1KW power motor to reversed control and switch tension adjuster VR, Ampere tension table instructions, the power indicator light.	



4.7.10. Electrical meter counter

4.7.10.1	Dia. of the pressure wheel:	Φ500mm;
4.7.10.2	Suitable cable Dia.:	Max.Φ20mm;
4.7.10.3	Working type	Only one direction cable cannot go back with high precision
4.7.10.4	Length	0~9999m
4.7.10.5	The lower part is the tool box	



4.7.11. Spark tester

4.7.11.1	Model	ST-15A
4.7.11.2	Dia. range	Φ0.1~Φ12mm;
4.7.11.3	Voltage:	1.0~15KV(Max.)
4.7.11.4	Voltage indication error	<5%
4.7.11.5	Detection sensitivity	<600uA
4.7.11.6	Detection resolution	0.05s
4.7.11.7	Max detection speed	350m/min
4.7.11.8	Length of testing electrode	280mm
4.7.11.9	Overall dimension	700*400*1190
4.7.11.10	Conform to Japan, the United States, European countries standard or the Great Wall of China certification;	



4.7.12. Φ600mm dual wheel capstan

4.7.12.1	Max design speed	350m/min
4.7.12.2	Center height	1000mm
4.7.12.3	Motor	5.5Kw AC motor
4.7.12.4	Structure	two wheel Type U shaped 4 groove
4.7.12.5	Material	Aluminum alloy
4.7.12.6	Box	Open door all-sealed box
4.7.12.7	independent structure is connected with the water tank, stable and not easy to deform, water tank material: 2mmt stainless steel plate (SUS304).High efficient blowing and wiping device is equipped at the end of wire-out. aluminum alloy roller shutter door	
4.7.12.8	Equipment at the end of the cable of the water tank, use high-pressure to air-drying surface water, to keep the site clean	



4.7.13. PN630-800mm dual-bobbin take up

4.7.13.1	Max design speed	350m/min
4.7.13.2	Suitable wire OD.	1.5-10mm
4.7.13.3	Suitable bobbin size	PN630-800mm
4.7.13.4	Motor	2 sets 5.5KW Siemens AC motor
4.7.13.5	Control	5.5KW inverter
4.7.13.6	Lift type	Bobbins lift and down by motor drive screw
4.7.13.7	Bobbin clamp	By pneumatic
4.7.13.8	Wire traverse	The traverse screw is driven by inverter motor, following take up speed.

4.7.13.9 Transverse pitch could be adjusted to make sure the transverse stable.



4.7.14. Electrical control system

4.7.14.1	Control system overview	
	Control cabinet	Rittal design, painted colors RAL 7035
	Cabinet size	L(1600)*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
4.7.14.2	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
4.7.14.3	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;
4.7.14.4	PLC Siemens S7-200 smart connected in Profinet with external and internal components as drives, video-keyboard, and remote PLC, or any other.	
4.7.14.5	Safety relays for emergency kept electro-mechanical outside the PLC.	
4.7.14.6	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.	
4.7.14.7	The software used is custom made to suit all needs for an easy use by the operator or by the technician.	
4.7.14.8	Cooling fan is controlled by the temperature control meter to make the temperature curve straight.	
4.7.14.9	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.	
4.7.14.10	Automatic process control: operated by touch screen and assisted by buttons.	



5. SPARE PARTS

SN	Description	Qty.
5.1	Barrel heater for EX80 Barrel heater for EX45 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
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.