

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

1、ADVANTAGE



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- 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	90 extruder insulation and sheathing line Model: SW90	1.00SET	107,300.00	107,300.00
TOTAL:				107,300.00

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.

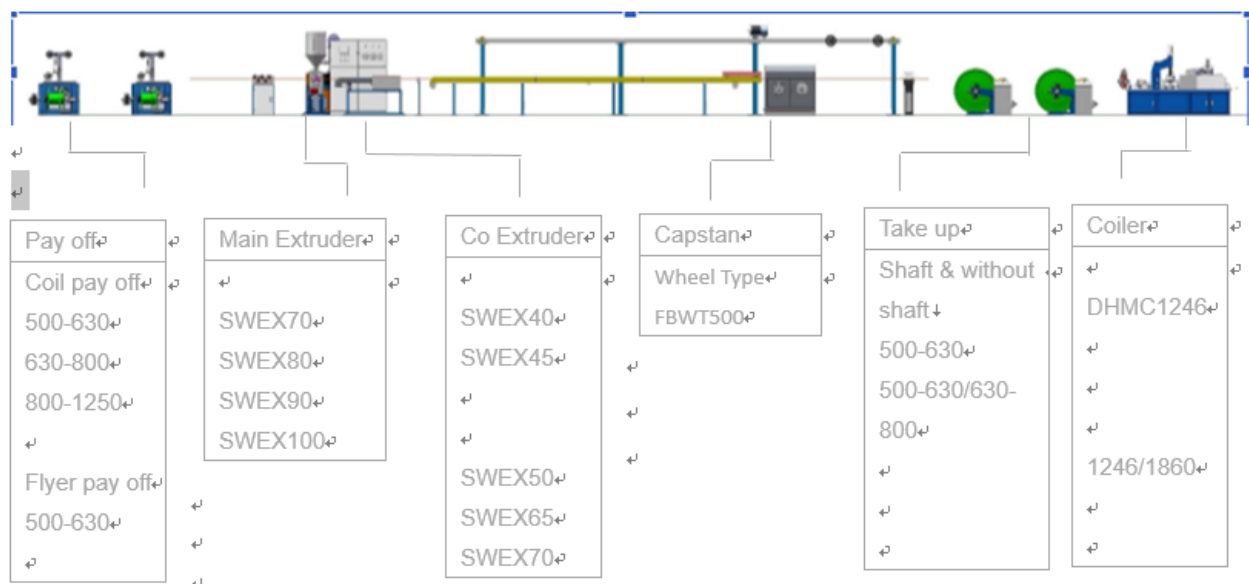
4、SPECIFICATION

SW 90 extruder insulation and sheathing line

4.1. General description

This machine is used for PVC and PE 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	LSZH	PVC	
4.3.2	Line speed	0 ~ 100m/min (25mm² --100m/min)					
4.3.3	Screw rotate speed	0-80RPM/min					
4.3.4	Maximum extruding capacity	Soft PVC:400kg/h					
	Size	Conduct or OD	Thickness mm	Finished OD	XLPE SPEED	LSZH SPEED	PVC SPEED
	25mm²	6.3	1.2	9mm			100m/min
	50mm²	8.9	1.4	11.9mm			80m/min

	150mm²	15.7	1.8	19.5mm			65m/min
	3*25mm²	25	1.8	28.6mm			50m/min
	3*50mm²	31.2	1.8	35mm			40m/min
4.3.5	Max output		1 screw for 90		300kg	320kg	400kg
4.3.6	Motor Power				75	90	75
4.3.7	Conductor size range		compacted & flexible copper conductor 25mm²-3*50mm² for insulation process, Input Dia. (mm) Φ8mm-Φ35mm				
4.3.8	Finished cable diameter (mm)		8-35	Cross head size		Adjustable type	
4.3.9	Applicable cable type		Insulation & jacketing				
4.3.10	Axis cable height		1000mm				
4.3.11	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	125KWh
		Water consumption	Circulation
		Air consumption	15m ³ /h
4.4.4	Bobbin	Take up	Pay off
	Flange	PN800-1600mm	PN1000-2000mm
	Bobbin width	600-1200mm	700-1600mm
	Traverse width	500-1000mm	600-1300 mm
	Bobbin Bore	127/80mm	127/80mm
	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	2 workers for one line	
4.4.8	Heating	Heating/cooling zone	5

		Heating power	22kw
4.4.9	Cooling system	Material	SUS 304
		Type	Single layer, Single Spraying
4.4.10	Capstan	7.5KW, frequency motor	
4.4.11	The water trough length	2.5 movable +20m single layer	
4.4.12	Take up	7.5KW, frequency motor	
4.4.13	Operator	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 35-38 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	PN800-1600mm Column type pay off (With foundation)	PN800-1600mm	
4.6.1.2	1	set	800 Caterpillar	800Kg	
4.6.1.3	1	set	High speed extruder	EX90*25	
4.6.1.4	1	set	Material Uploading Dry unit-hopper	200kg/h	
4.6.1.5	1	set	Cross head	Manual centering cross head	
4.6.1.6	1	set	Drying system	4Kw Blower	Drying system
4.6.1.7	1	set	Diameter gauge	Chinese famous brand DDM3050	
4.6.1.8	1	set	Primary- secondary moving homothermal water trough	2.5M	
4.6.1.9	1	set	stainless steel cooling trough	20m single layer	
4.6.1.10	1	set	1250 Caterpillar	1250Kg	Tract Cable
4.6.1.11	1	set	Spark tester	15KV-Chinese famous brand	
4.6.1.12	1	set	Column type pay off (With foundation)	1250-2000	Take-up
4.6.1.13	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
Main extruder 90mm	75kw AC	Siemens or Yaskawa	Siemens Beide
Capstan	7.5kw AC	Siemens or Yaskawa	Siemens Beide
PN800-1250mm take up	7.5kw AC	Siemens or Yaskawa	Siemens Beide

4.6.2.2.Other

	Manufacture		
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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		

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


4.7.1.PN800-1600mm Column type pay off (With foundation)

	Name of product	Type/None	
4.7.1..1	Speed	Max:100m/min	
4.7.1.2	Bobbin size:	PN800-1600mm	
4.7.1.3	Loading/unloading	BLY120-35-0.75KW with Cycloidal reducer	
4.7.1.4	Cable OD.	7-70mm	
4.7.1.5	Max. loading	2.5T	
4.7.1.6	Tension	10Kg tension and adjustable	
	Pay-off tension is controlled by mechanical friction and adjusted by hand operation.		
	The whole equipment is installed on the iron plate without additional foundation		



4.7.2	800 Caterpillar		
	Cable dia:	Max: ϕ 50mm	
	Max traction:	800KG	
	Traction speed:	100m/min	
	Tract length of the contact:	1000mm	

Caterpillar specification:	20*120*4930mm
Tension control:	10KG magnetic power clutch
Cylinders quantity:	5 pairs
Equipment center height:	1000mm
<p>Structure: The traction machine for the pneumatic compression and automatic tensioning traction belt, driven by K87 series of spiral bevel gearbox to achieve, traction speed and the former traction, extruder speed synchronous control, stable and reliable. Traction belt for the two seamless reinforcement within the belt, configure the instantaneous line speed and cumulative length of the display instrument. Traction machine power section with guardrail.</p>	

A photograph of a blue industrial machine, identified by the label 'TQDII-800' on its front panel. The machine features a series of orange rollers arranged in a row. It is situated in a factory or industrial setting, with other equipment visible in the background. The machine has a sturdy blue frame and a control panel with various buttons and a small digital display.

4.7.3 EX90 High speed extruder

4.7.3.1	Screw data	
	Diameter	90mm
	Length-diameter Ratio:	25: 1
	Screw structure	PVC-BM
	Max speed	10-80RPM
	Screw rigidity	reach HV950
	Material	38CrMoAlA, nitrogen treatment; (Nitride depth:0.6)
	Output with PVC	≤400KG/H
	Output with XLPE	≤300KG/H
4.7.3.2	Barrel data	
	N. of heated/cooled zones	5
	Heating power for each zone	4.5KW

	Total heating power	22KW
	Material	38CrMoAlA, nitrogen treatment; (Nitride depth:0.6)
	Temperature adjustment up to	0-350°,±2°; Japan PKC thermometer + relay control;
	Heating system	electric resistances
	Cooling system	air flow with electro fans
4.7.3.3	Electric parameters	
	Driven motor	75KW , Siemens AC motor
	Barrel cooling electric fan	250W/AC380V
	Temperature controller	RKC
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	400kg/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.	



4.7.5 Crosshead

4.7.5.1	The main characteristics	Single layer
4.7.5.2	Extrusion thickness(mm)	0.5-1.8
4.7.5.3	Fix and Centering	Manual centering
4.7.5.4	Finished wire range	25mm ² -3*50mm ² (8-35mm)
4.7.5.5	Heating	3 heating zones for a neck, for a crosshead and for a die, natural cooling.
4.7.5.6	Crosshead is made of imported S136 heat-resistant anti-corrosion alloy steel. After oxidation treatment, the surface is plated with hard chrome	



4.7.6. Diameter gauge

4.7.6.1	Model	DDM-3050
4.7.6.2	Measurement range	Max. OD 50 mm
4.7.6.3	Recommend measurement range	0.05-45mm
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. Ribbon hot printer

	Print type:	Ribbon print
	Dia. range	Φ6-50mm;
	Max line speed	100m/min
	Power	380V, 50Hz
	Heating power	0.4Kw

	Heating temperature	80-120℃
	Center height	1000mm, up-down adjustment
	Hot-press printing ribbon printing, clear script, good adhesion, not apt to erase and superior to the ink printing method;	
	Meter figures of printing alphabet blocks adopt electric heating and temperature control regulation system is equipped for convenient adjustment, high precision of temperature control and stable printing quality;	



4.7.8. Cooling trough

4.7.8.1	2.5m primary moving water trough and tank	
	Suitable for wire diameter	Max 40mm
	Centering height	1000mm
	Material	SUS304 stainless steel
	Total length	2.5m
	Moving range	0.5m
	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 40mm

	Centering height	1000mm
	Dimension	U type: 300(W)*240(H)
	Material	SUS304 stainless steel
	Total length	20m
	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	Dry with vortex fan

4.7.11. Spark tester

4.7.11.1	Model	ST-15A
4.7.11.2	Dia. range	Max $\Phi 40$ mm;
4.7.11.3	Voltage:	2.0-15.0KV
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	200m/min
4.7.11.10	Conform to Japan, the United States, European countries standard or the Great Wall of China certification;	



4.7.12. 1250 kgCaterpillar

4.7.12.1	Cable dia:	Max: $\phi 50\text{mm}$
4.7.12.2	Max traction:	1250KG
4.7.12.3	Traction speed:	100m/min
4.7.12.4	Tract length of the contact:	1500mm
4.7.12.5	Caterpillar specification:	20*120*4930mm
4.7.12.6	Box	Open door all-sealed box
	Tension control:	7.5Kw AC motor
	Cylinders quantity:	5pairs
	Equipment center height:	1000mm

Structure: The traction machine for the pneumatic compression and automatic tensioning traction belt, driven by 7.5Kw AC motor + K87 series of spiral bevel gearbox to achieve, traction speed and the former traction, extruder speed synchronous control, stable and reliable. Traction belt for the two seamless reinforcement within the belt, configure the instantaneous line speed and cumulative length of the display instrument. Traction machine power section with guardrail.



4.7.13. PN1000-2000mm Column type take up (With foundation)

4.7.13.1	Speed	Max:100m/min
4.7.13.2	Bobbin size:	PN1000-2000mm
4.7.13.3	Loading/unloading	BLY120-35-0.75KW with Cycloidal reducer
4.7.13.4	Cable OD.	7-70mm
4.7.13.5	Lift type	Bobbins lift and down by motor drive screw
4.7.13.6	Motor	7.5KW Siemens AC motor
4.7.13.7	Control	7.5KW inverter
	Wire traverse	The traverse screw is driven by inverter motor, following take up speed.
4.7.13.8	Transverse pitch could be adjusted to make sure the transverse stable.	
4.7.13.9	The whole equipment is installed on the iron plate without additional foundation	



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 EX90 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.

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