



# CATALOGUE OF DRIP IRRIGATION MACHINERY

**TIANJIN HUAXU SHENGTAI TECHNOLOGY CO.,LTD.**

*THE BIRTHPLACE OF ULTRA HIGH-SPEED DRIP IRRIGATION PIPE PRODUCTION LINE*

*COMMITTED TO INTELIGENT AGRICULTURE/  
CULTIVATING INNOVATIVE GREENER FUTURE*



Tianjin HuaXu ShengTai Technology Co., Ltd.

The Birthplace of Ultra High-speed Drip Irrigation Pipe Production Line



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## 公司简介 Company Introduction



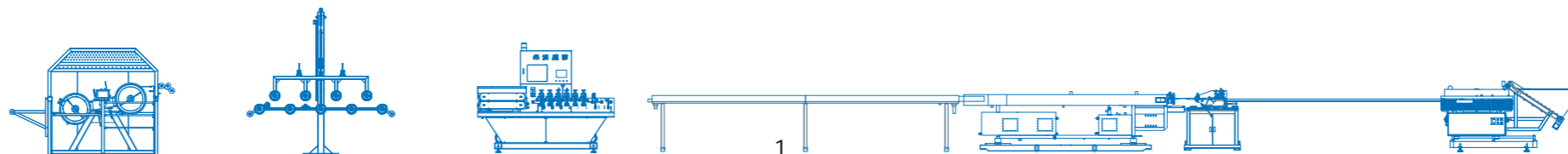
Tianjin Huaxushengtai Technology Co., Ltd. was founded in 2013. Since its establishment, it has been committed to research and development, application and promotion of intelligent manufacturing project of intelligent agricultural and supporting drip irrigation production facilities. It has developed HX series drip irrigation pipe production line and intelligent irrigation project interactive management system, drip irrigation pipe intelligent factory cluster storage system, compensation dripper automatic assembly detection control system, has now formed a complete system from research and development, production and manufacturing, installation and commissioning to after-sales service of drip irrigation productions. With a team of excellent comprehensive quality, rich professional skills, advanced technology and perfect service, With an annual production capacity of several hundreds drip irrigation pipe production lines or sets, it has already occupied a place in water-saving irrigation industry in China.

Huaxushengtai has been recognized as "Tianjin High-tech Enterprise", "Science and Technology-based Small and Medium-sized Enterprise", "National High-tech Enterprise", "Tianjin Key New Product", and has become a director unit of the Water-saving Equipment Committee of China Plastics Industry Association, member unit of China Agricultural Machinery Circulation Association, and certified by the ISO9001 quality certification system, the two integration management system.

## 公司荣誉 Company's Certificate



## 获得多项国家专利及软件著作权，拥有自主知识产权 Proprietary intellectual property rights Having dozens of products awarded many national patents





## HXGS系列内镶扁平滴头滴灌管生产线

### HXGS Inline Flat Drip Irrigation Pipe Production Line

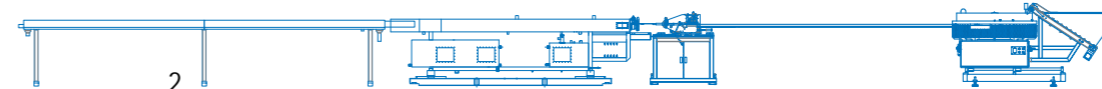
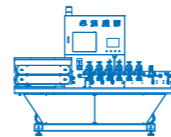
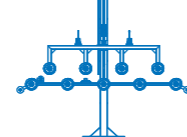
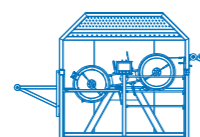
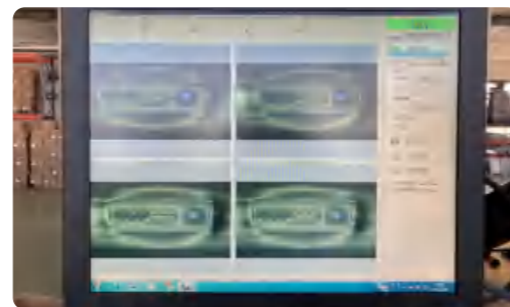
Components of production line:

1. Dripper sorting collating unit;
2. Dripper conveying embedded device;
3. Single screw extruding device;
4. Vacuum Setting Cooling device;
5. Single position caterpillar-tractor;
6. Dripper dedicated punching machine;
7. Weep hole monitoring and alarming device;
8. Double position winding machine;
9. Electrical control system;

滴灌带直径	滴灌带壁厚	生产速度	滴头间距
φ 12-16-20 -22-25	0.12-0.4mm 0.4-1.2mm (可选)	360m/min	100、150、200、 300、400、500、 1000mm
间距		正常速度	
间距300mm		360m/min	
间距200mm		360m/min	
间距100mm		300m/min	
间距100mm (双孔滴头)		300m/min	

The technical features of dripping irrigation pipes producing line are as follows:

1. The control system adopts centralized control of PLC-human-computer interface, the procedures are stable and operates conveniently.
2. Dripper Material loading, sieving, transporting and cementing are all automatically completed with accurate space and firmly bonded.
3. The design of the screw and the hands-piece are unique, the extruder pipes are with good plasticity, glossy surface and homogenizing wall thickness.
4. The vacuum water tank, and the cooling device are all adopting the technology of stainless steel processing so as to make it's accurate coining and vacuum stability more stable.
5. Caterpillar band with it's strong traction to operate smoothly, the running speed can be adjusted synchronously with it's production speed.
6. Plughole under the real-time monitoring of hole punching device, which will turn on the alarm immediately when the hole is missed.
7. It has great advantages for small spacing double-hole dripper.



## 精密模具设计制造

### Precision Mould Design and Making

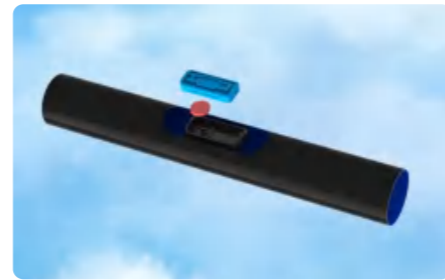


Various types of dripper mould can be designed and produced according to the shape and size of dripper required by customers;  
 Dripper flow range: 0.6L/H-8L/H;  
 Flat dripper moulds with 128-cavity, 256-cavity full hot runner, 384-cavity, 448-cavity semi-hot runner can be produced;  
 The hot runner mould is equipped with imported temperature control system;  
 The dripper mould has high precision, high efficiency, and the mould opening cycle is about 4-7 seconds;  
 The dripper mould has a long service life, High-speed mould can guarantee 10 million times of free warranty





## HXGT系列内镶压力补偿滴头及滴灌管 HXGT Pressure Compensation Dripper&Pipe



HuaXuShengTai has successfully developed the internationally advanced HXGT series of inlaid pressure compensating dripper and drip irrigation pipe, which is currently a widely applied pressure compensating drip irrigation technology in the world. The product has a variety of flow wall thickness and spacing of the setting range, the compensation effect is stable, the working pressure range is large, to ensure that the drip irrigation system has enough uniformity of irrigation. It has wider runner, larger filtration surface and lower static loss, and is longer than the laid length. With strong topographic adaptability, it can be widely used in the land with large topographic fluctuation difference, such as desert hills, mountains and woodlands. It is an ideal choice for all kinds of crops.



管材直径(mm) Inside diameter	16/20/25	管材壁厚(mm) Wall Thickness	0.4-1.2
滴头间距(mm) Drop spacing	200-1000	公称流量(L/H) Designed discharge of dripper	1.5-3.0
工作压力(kpa) Working pressure	50-350	铺设长度(m) Laying length	150-450

## HXGT系列双层共挤压力补偿滴灌管生产线 HXGT Double extrusion total compensation drip irrigation pipe production n



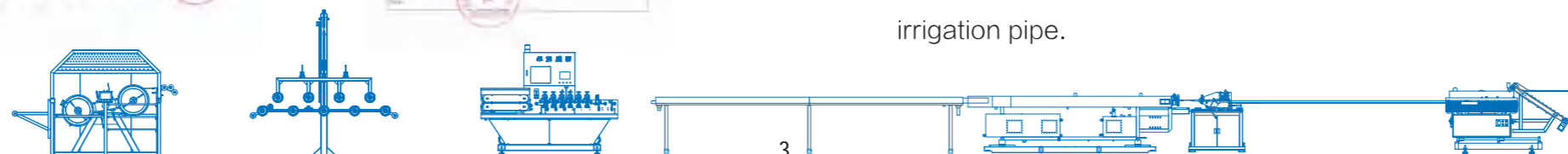
管材直径 Inside diameter	16/20/25mm
管材壁厚 Wall Thickness	0.4-1.2mm
滴头间距 Drop spacing	200-1000mm
滴头筛选速度 Drop screening speed	600p/min
打孔速度 Punching speed	500p/min
生产速度 Production speed	40-150m/min



HXGT Double extrusion total compensation drip irrigation pipe production unit by high precision pressure compensation first injection mold with high precision and compensate the droppers installed automatically groups and has the world advanced drip irrigation pipe production technology of double layer composite pressure force compensation drip irrigation pipe production line together.

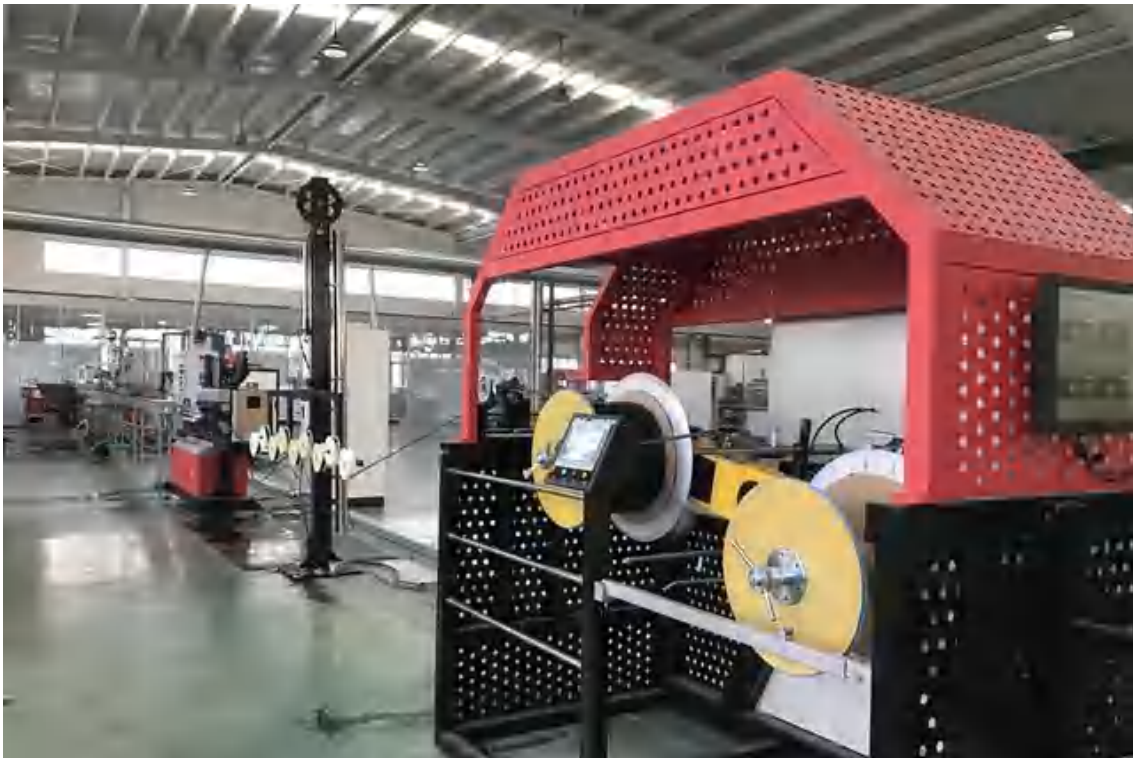
The unit has the characteristics of low injection deviation of compensating dripper, low assembly and detection accuracy of compensating dripper, good compression resistance, good flow state index and so on.

The pressure compensating drip irrigation pipe produced by the unit has a high uniformity of flowing water, and has an incomparable hydraulic performance compared with any other drip irrigation pipe.





## Inlaid Flat Dripper Drip Irrigation Pipe Production Line



### Technical Parameters

Pipe Diameter	Pipe Thickness	Normal Production Speed	Dripper Spacing
Φ12-16-20-22-25	0.12-0.4mm	300m/min	100, 150, 200, 300, 400, 500, 1000mm
	0.4-1.2mm		
	(Optional)		

Spacing	Normal Production Speed
300mm	360m/min
200mm	360m/min
100mm	300m/min



<https://youtu.be/3ZqSUFmUf4I>

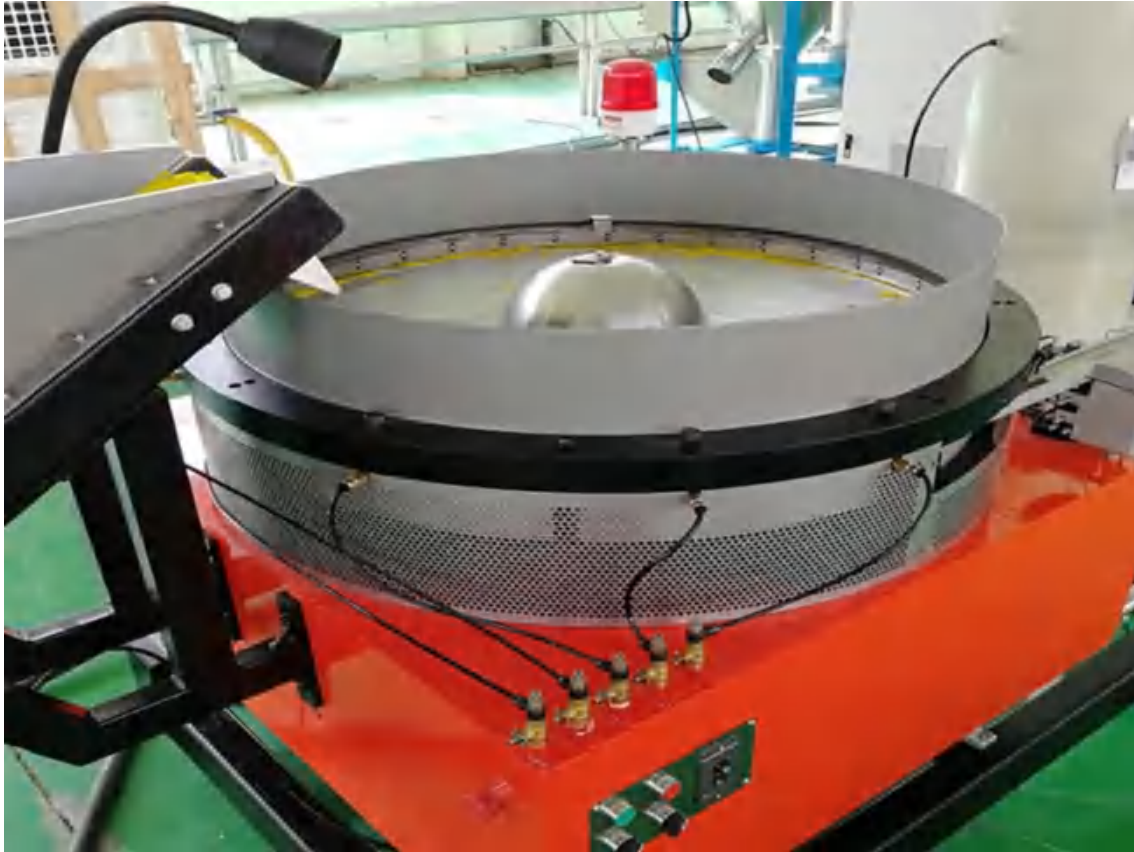




### Production Introduction

#### Core Component 1: Dripper Screening Device

Equipped with advanced dripper conveying and storage device, automatic dripper screening, 1500W screening motor, pneumatic centrifugal screening method, conveying dripper speed greater than 2000 pieces/min.



#### Core Component 2: Dripper Conveyor

The pathway is drawing forming by aluminum alloy, which ensures smoothing the high speed delivery of drippers, it is convenient for changing the wear parts.

Adopt the AC servo motor, which ensures the stability of the drippers delivery.

The loading device is controlled by servo-system, which ensures the dripper to maintain their set space according to the changeable speed of the dripping tube at any time.





**Core Component 3: Single-screw Extruder**

The machine nose adopts single layer spiral structure, the inner pressure is uniformity, which could improve the flow property of the plastic, the gloss of the products and the wall thickness uniformity, which is suitable for the high speed production of the thin wall pipe.



**Core Component 4: Punching and HD Punching Visual Detection Device**

Fully automatic punching device, maximum punching speed > 2600pieces/minute;  
Equipped with advanced punching visual inspection device, which could automatically inspect the punching effect.  
Timely find the situation of deviation, missed hit, or no chips, and report to the alarm in time.  
Real-time tracking and adjustment of punching status through PLC control screen.





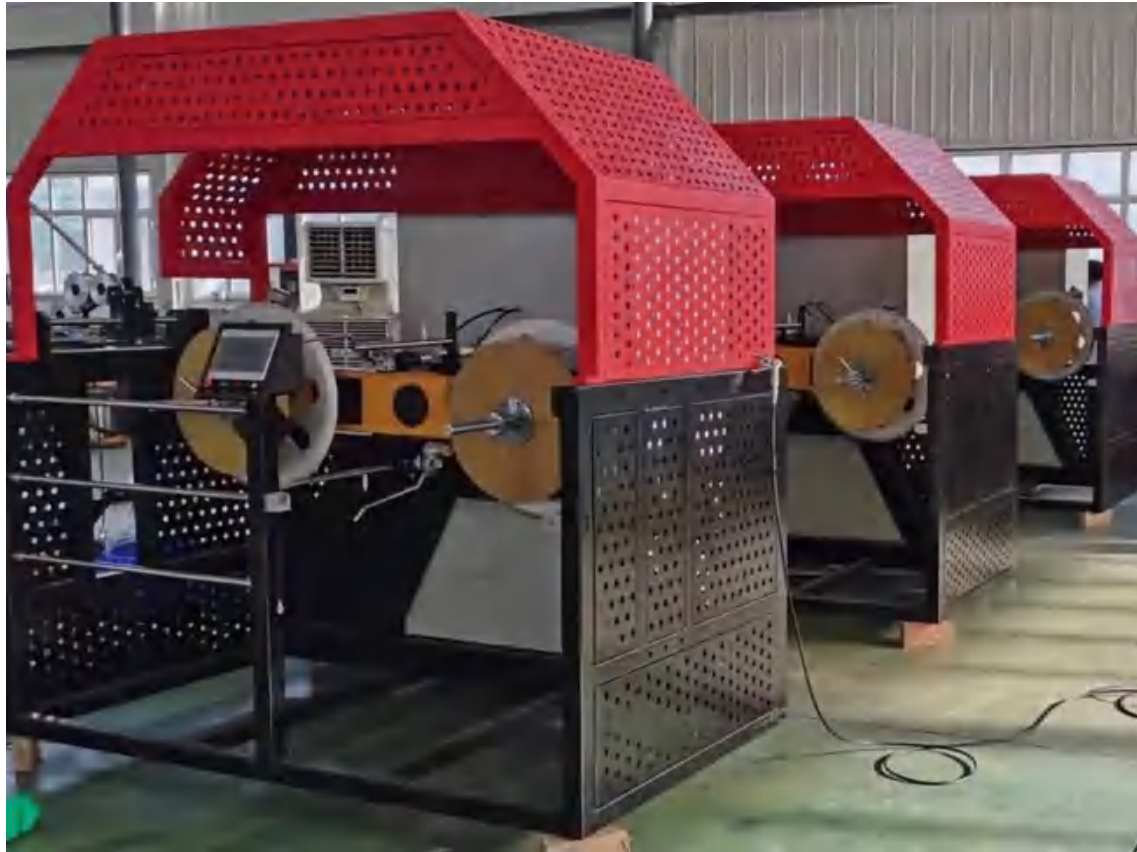


**Core Component 5: Double Position Winding Machine**

Automatically completes the rewinding, rewinding and switching of the drip irrigation pipe, and the maximum rewinding speed can reach 400m/min.






Imported AC servo motor is selected to ensure the stability of winding.

Control the operation through the PLC man-machine interface.





**INLAID FLAT DRIPPER DRIP IRRIGATION PIPE PRODUCTION LINE DEVICE LIST**

IDX	Description & Standard	Memo
1	Dripper sorting device: Model 1480 Dripper size: 23mm*6mm*2.1mm, >4000pcs/min	
2	High speed dripper Conveying device Servo motor (Panasonic) : 750w 4000pcs/min Suitable for dripper size: 23mm*6mm*2.1mm	
3	Single screw servo extruder and temperature control system 75/37:1 Screen Changer: model 160 Servo motor (Hui Chuan) : 60kw	
4	Single screw servo extruder and temperature control system 80/40:1 Screen Changer: model 160 Servo motor (Hui Chuan) : 80kw	
5	vacuum calibrating device 4 meters Automatic opening and closing vacuum control system Servo motor (Panasonic) : 400w	
6	Secondary cooling device	4 meters











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7	<p>Hauling&amp;Punching device and control system Six-Motor</p> <p>Punching device servo motor (Panasonic) : 750w Hauling device servo motor (Panasonic) : 3kw Maximum punching speed &gt;4500pcs/min Maximum hauling speed &gt;450m/min</p>	
8	<p>Double Position automatical Winder device servo motor: 3kw Drivers and motors: Panasonic Maximum winding speed &gt;450m/min</p>	
9	<p>Thick wall thickness winder device</p>	
10	<p>Wheel tension assembly device Working speed &gt;420m/hour, one operator could handle it</p>	
11	<p>Industrial chiller 20P</p>	
12	<p>Water tank 1M<sup>3</sup></p>	



### TECHNICAL SPECIFICATION

Pipe diameter	Wall thickness	Dripper spacing	Normal production speed
Φ16 mm	0.15-0.2mm	300mm	360m/min
Φ16 mm	0.15-0.2mm	200mm	360m/min
Φ16 mm	0.15-0.2mm	150mm	360m/min
Φ16 mm	0.15-0.2mm	100mm	320m/min
Φ16 mm	0.15-0.2mm	100mm (dual hole) 	320m/min
Pipe diameter in production	φ16 mm		
Wall thickness in production	0.15-0.6 mm		
Installation rated power	210KW		
Dripper conveying spacing	100-1000 mm		
Standard function	One-click automatic pipe hauling, broken pipe protection, pinhole detection, excessive spacing alarm, punching recognition alarm, automatic rejection of reverse dripper		
Outsourcing granulation addition ratio	>90%		





## Inlaid Flat Dripper Pressure Compensating Drip Irrigation Pipe Production Line



### Technical Parameters

Pipe Diameter	Pipe Thickness	Dripper Spacing	Normal Production Speed
Φ16 mm	0.4mm	400mm	150m/min
	0.6mm	400mm	100 m/min
	0.8mm	400mm	80 m/min
	1.0mm	400mm	60 m/min



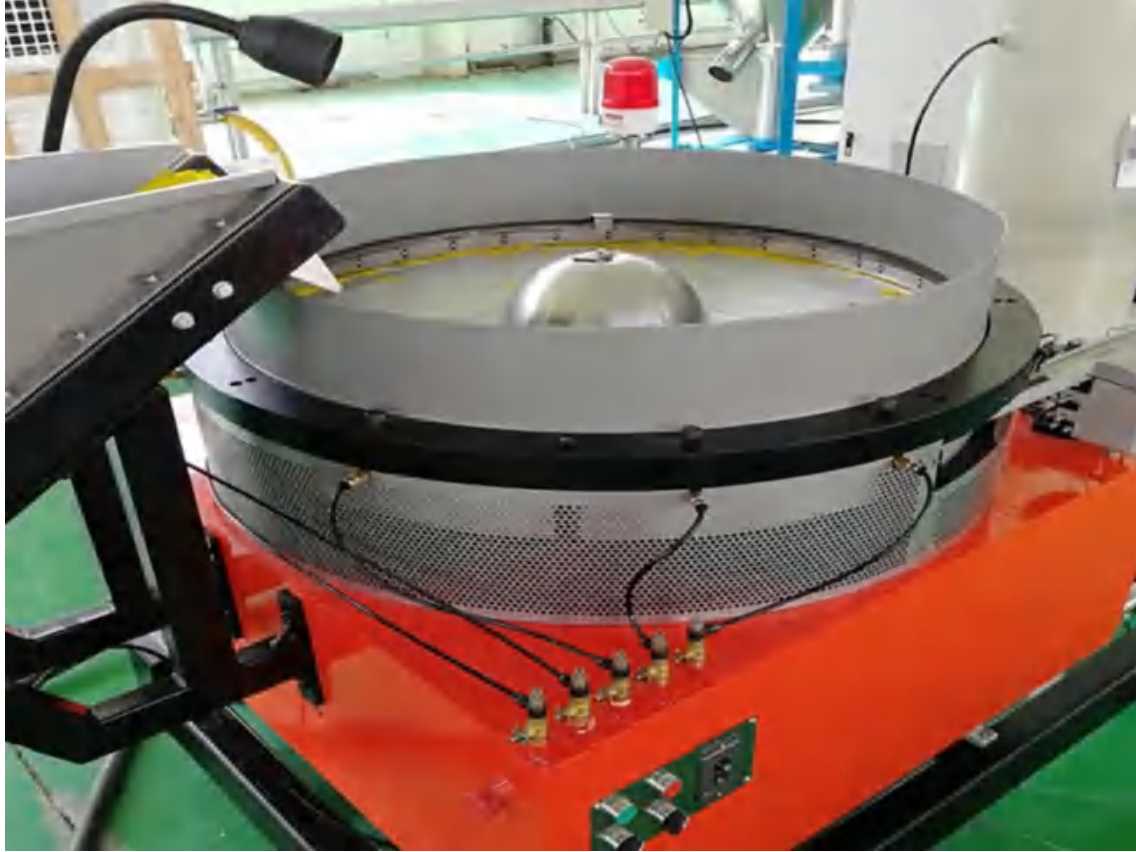
<https://youtu.be/XF5mmGF77NI>



### Production Introduction

#### Core Component 1: Dripper Screening Device

Equipped with advanced dripper conveying and storage device, automatic dripper screening, 1500W screening motor, two selection discs with diameters of 1000mm and 1280mm, and the screening speed is 800-1200 pieces/min and 1200-1500 pieces/min respectively.



#### Core Component 2: Dripper Conveyor

The pathway is drawing forming by aluminum alloy, which ensures smoothing the high speed delivery of drippers, it is convenient for changing the wear parts.

Adopt the AC servo motor, which ensures the stability of the drippers delivery.

The loading device is controlled by servo-system, which ensures the dripper to maintain their set space according to the changeable speed of the dripping tube at any time.







**Core Component 3: Single-screw Extruder**

The machine head adopts a single-layer spiral structure, and the internal pressure is uniform, which improves the fluidity of the plastic, the gloss of the product and the uniformity of the wall thickness, which is suitable for the high-speed production of thick-walled pipes;

At the same time, the co-extrusion compound unit composed of two extruders can realize the production of double-layer composite pipes.



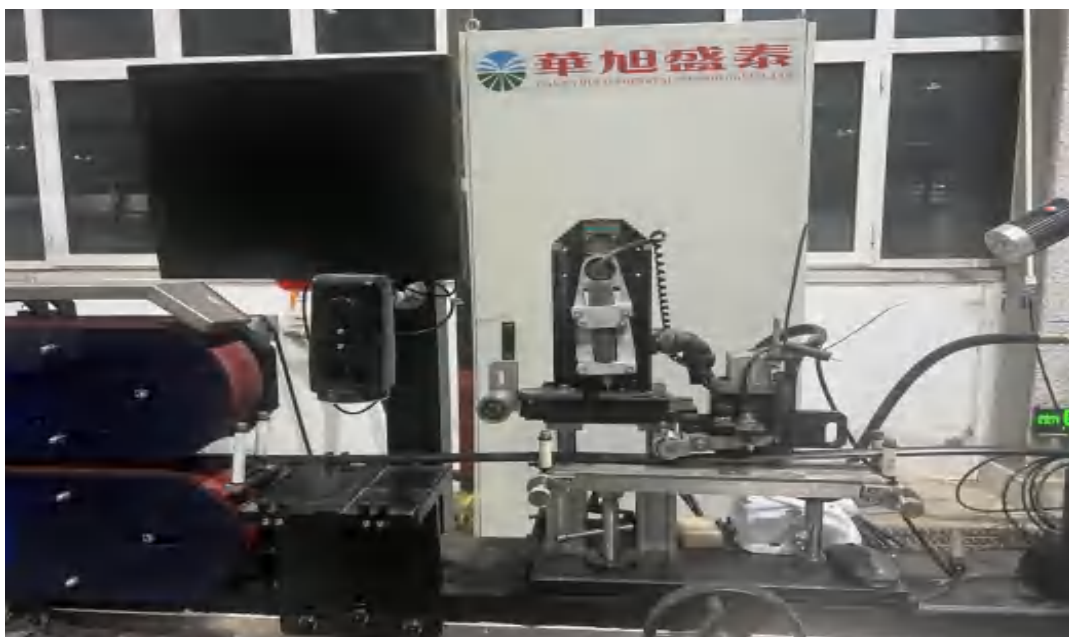
**Core Component 4: Punching and HD Punching Visual Detection Device**

Fully automatic punching device, maximum punching speed > 1000 pieces/minute;

Equipped with advanced punching visual inspection device, which could automatically inspect the punching effect.

Timely find the situation of deviation, missed hit, or no chips, and report to the alarm in time.

Real-time tracking and adjustment of punching status through PLC control screen.





**Core Component 5: Thick Wall Dedicated Automatic Winding Device**

Automatic roll change, automatic bundling, and winding speed up to 150m/min;  
Imported AC servo motor is used to ensure the stability of winding;  
Control the operation through the PLC man-machine interface.







**PRESSURE COMPENSATING DRIP IRRIGATION PIPE PRODUCTION LINE DEVICE LIST**







IDX	Description & Standard	Memo
1	Dripper sorting device: Model 1480 >1500pcs/min	
2	High speed dripper Conveying device Servo motor (Panasonic) : 750w 3000pcs/min Suitable for dripper size: 23mm*6mm*2.1mm	
4	Single screw servo extruder and temperature control system 85/38:1 Screen Changer: model 160 Servo motor (Hui Chuan) : 80kw	
5	vacuum calibrating device 4 meters Automatic opening and closing vacuum control system Servo motor (Panasonic) : 400w	
6	Secondary cooling device	12 meters



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7	<p>Hauling&amp;Punching device and control system Punching device servo motor (Panasonic) : 750w Hauling device servo motor (Panasonic) : 3kw Maximum punching speed &gt;600pcs/min Maximum hauling speed &gt;280m/min</p>	
8	<p>Double Position automatical Winder device servo motor: 3kw Drivers and motors: Panasonic Maximum winding speed &gt;360m/min</p>	
9	<p>Automatical Winder device</p>	
10	<p>Wheel tension assembly device Working speed &gt;300m/hour, one operator could handle it</p>	
11	<p>Industrial chiller 25P</p>	
12	<p>Water tank 1M<sup>3</sup></p>	





### TECHNICAL SPECIFICATION

Pipe diameter	Wall thickness	Dripper spacing	Normal production speed
Φ16 mm	0.8mm	400mm	80m/min
Φ16 mm	1.0mm	400mm	60m/min
Φ16 mm	1.2mm	400mm	40m/min
Pipe diameter in production	Φ16 mm		
Wall thickness in production	0.4-1.2 mm		
Installation rated power	200KW		
Dripper conveying spacing	200、 300、 400、 500、 1000mm		
Standard function	One-click automatic pipe hauling, broken pipe protection, pinhole detection, excessive spacing alarm, punching recognition alarm, automatic rejection of reverse dripper		
Outsourcing granulation addition ratio	> 90%		



## Inlaid T-tape drip irrigation pipe production line



### Technical Parameters

Pipe Diameter	Pipe Thickness	Normal Production Speed	Dripper Spacing
Φ12-16-20-22-25	0.18-1.2mm (Optional)	150m~200m/min	/

Inlaid T-tape dripper is designed with a turbulent flow that is long enough to produce a damping effect and reduce pressure. This design enhances uniformity of flow significantly compared to flat drippers and normal labyrinth irrigation pipes. Moreover, it boasts a clear advantage in anti-blocking capabilities. The water outlet employs a slit-type construction similar to a one-way valve, shutting off water flow when negative pressure occurs in the pipe. This prevents the absorption of soil from the field and prevents clogging by grass roots due to negative pressure.

1. Exceptionally high irrigation uniformity and superior flow index offer hydraulic performance beyond comparison with other types of irrigation pipes.
2. Extrusion welding forms the pipe in one piece, eliminating joints and rough edges, reducing the risk of bursting under compression.
3. Numerous filter holes at the inlet ensure high resistance to clogging.
4. The outlet features machine-perforated slots, preventing intrusion of plant roots and insects that could block the dripper. Its anti-blocking performance surpasses other types due to its special outlet design.
5. The extended turbulent flow and good flow index facilitate excellent energy dissipation and offer certain compensation.
6. The exclusive double blue stripe makes it easier to identify during installation.
7. Available in various pipe diameters and thicknesses, with certain compensation, allowing for longer laying lengths.



<https://youtu.be/XF5mmGF77NI>





## Inlaid T-tape drip irrigation pipe production line



### Production Introduction

#### Core Component 1: T-tape Dripper Shapping Device

Inlaid T-tape dripper ensures precise formation of internal labyrinth strips, crucial for water flow accuracy.

1. Thermoforming Technology: The inlaid labyrinth T-tape drippers are thermoformed with precision, guaranteeing exact water flow.
2. Servo Motor Control: The inlaid labyrinth T-tape dripper shapping device is equipped with servo motor control, ensuring efficient operation and adaptability.
3. Customizable Flow: Easily adjustable to accommodate clients' required flow rates, facilitating versatility in usage.
4. Special Technologies: Incorporates advanced internal cooling systems to ensure continuous strip production and high-speed molding, enhancing productivity and reliability.





**Core Component 2 : Punching and HD Punching Visual Detection Device**

Fully automatic punching device, maximum punching speed > 1000 pieces/minute;

Equipped with advanced punching visual inspection device, which could automatically inspect the punching effect.

Timely find the situation of deviation, missed hit, or no chips, and report to the alarm in time.

Real-time tracking and adjustment of punching status through PLC control screen.

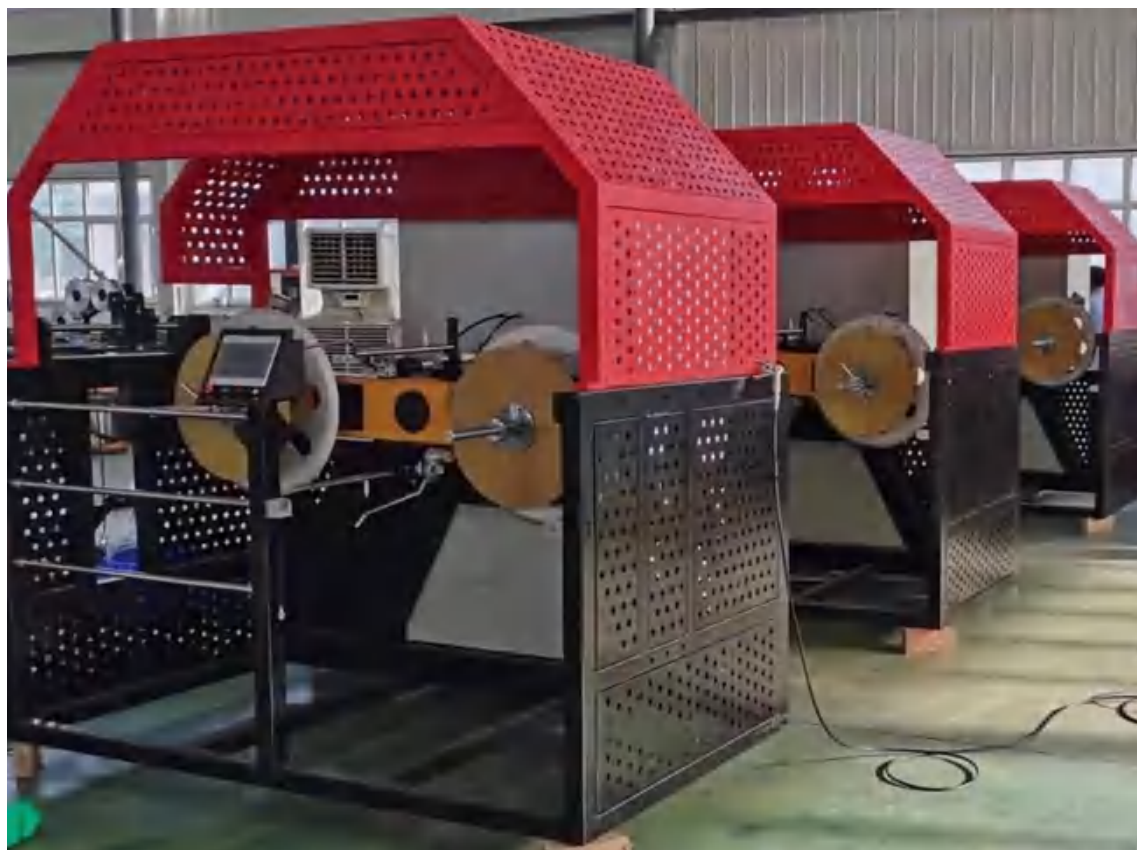


**Core Component 3: Double Position Winding Machine**

Automatically completes the rewinding, rewinding and switching of the drip irrigation pipe, and the maximum rewinding speed can reach 400m/min.

Imported AC servo motor is selected to ensure the stability of winding.

Control the operation through the PLC man-machine interface.





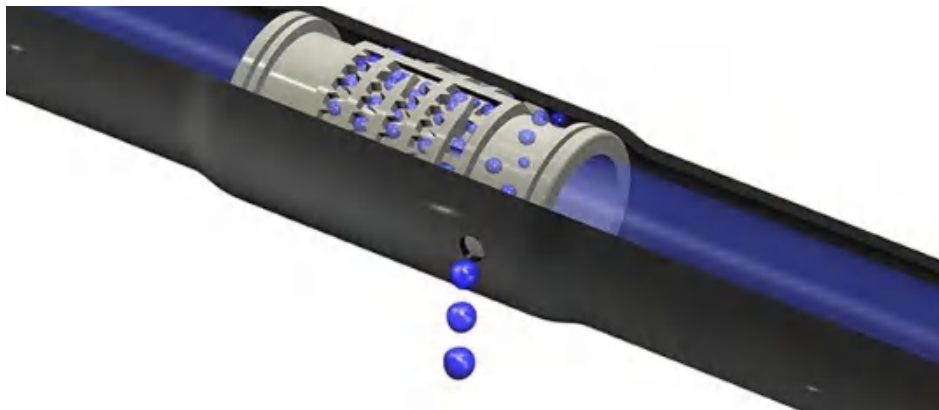
### TECHNICAL SPECIFICATION

Type	Pipe diameter	Wall thickness	Dripper spacing	Normal production speed
T-tape filter	Φ16 mm	0.15-0.2mm	adjustable	200m/min
Pipe diameter in production	φ16 mm			
Wall thickness in production	0.15-0.2mm			
Installation rated power	125KW			
Dripper conveying spacing	adjustable			
Standard function	One-click automatic pipe hauling, broken pipe protection, pinhole detection, excessive spacing alarm, punching recognition alarm.			
Outsourcing granulation addition ratio	> 90%			





## Cylindrical Dripper Drip Irrigation Pipe Production Line



### Technical Parameters

Pipe Diameter	Pipe Thickness	Normal Production Speed	Dripper Spacing
Φ12-16-20-22-25	0.5-1.5mm (Optional)	30m~80m/min	100, 150, 200, 300, 400, 500, 1000mm



<https://youtu.be/rdzZVpnzJ7U>



### Production Introduction

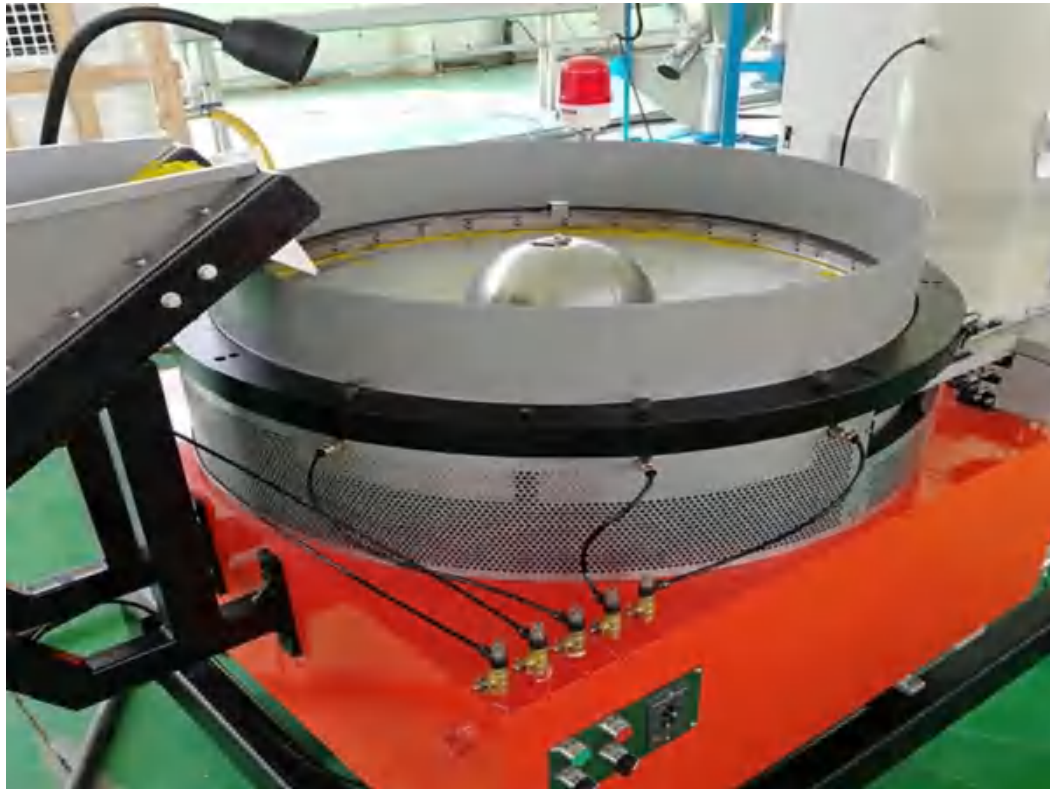
#### Core Component 1: Dripper Screening Device

High-Speed Dripper Screening and Insertion System: Capable of efficiently screening and inserting cylindrical drippers at a rapid pace.

Versatile Dripper Compatibility: Designed to handle cylindrical drippers of various sizes, including 12mm, 16mm, and 20mm.

Insertion Speed: Achieves an impressive insertion speed of 400 pieces per minute, ensuring high productivity.

Precision Servo-Driven Control: Equipped with a servo-driven system for precise control over the dripper insertion process, ensuring accuracy and reliability



#### Core Component 2: Single-screw Extruder

The machine nose adopts single layer spiral structure, the inner pressure is uniformity, which could improve the flow property of the plastic, the gloss of the products and the wall thickness uniformity, which is suitable for the high speed production of the thin wall pipe.





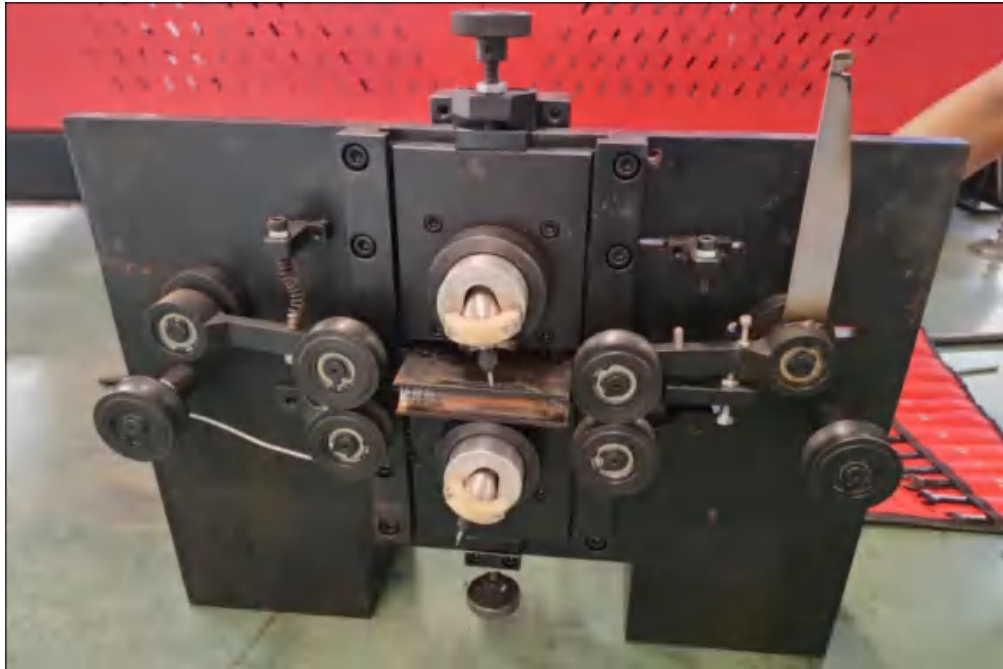
**Core Component 3 : Punching and HD Punching Visual Detection Device**

Fully automatic punching device, maximum punching speed > 1000 pieces/minute;

Equipped with advanced punching visual inspection device, which could automatically inspect the punching effect.

Timely find the situation of deviation, missed hit, or no chips, and report to the alarm in time.

Real-time tracking and adjustment of punching status through PLC control screen.



**Core Component 4 : Thick Wall Dedicated Automatic Winding Device**

Automatic roll change, automatic bundling, and winding speed up to 150m/min;

Imported AC servo motor is used to ensure the stability of winding;

Control the operation through the PLC man-machine interface.







## **Cylindrical Dripper Irrigation Pipe Production Line Configuration List and Reference Pictures**





IDX	Description & Standard	Memo
1	Dripper screening device: Model 1280 500pcs/min	
2	High speed dripper Conveying device Servo motor (Panasonic) : 750w 500pcs/min	
3	Single screw servo extruder and temperature control system 1 90-38:1 Screen Changer: model 160 Servo motor (Hui Chuan) : 80kw	
4	Secondary Cooling Unit	
5	vacuum calibrating device Automatic opening and closing vacuum control system	



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6	<p>Hauling&amp;Punching device and control system ( 2 punching knife)</p> <p>Punching device servo motor (Panasonic) : 750w Hauling device servo motor (Panasonic) : 3kw</p>	
7	<p>Thick wall pipe automatical Winder device Winding motor: adopt the AC servo motor, which ensures the stability of the winding. Reel changing mode: automatically, with automatic bunding device Wiring mode: high precision wiring device Winding reel width: 200-400mm Max. winding speed: 150m/min</p>	
8	<p>Industrial water chiller 25P</p>	
9	<p>Water storage tank 1M<sup>3</sup></p>	



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### TECHNICAL SPECIFICATION

Type	Pipe diameter	Wall thickness	Dripper spacing	Normal production speed
Cylindrical dripper	Φ16 mm	0.8-1.2mm	400mm	30-80m/min
Pipe diameter in production	φ16 mm			
Wall thickness in production	0.8-1.2 mm			
Installation rated power	160KW			
Dripper conveying spacing	400-1000 mm			



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