



天牛智能  
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天牛涂布，与世界同步。  
TIANNIU COATING, SYNCHRONIZE WITH THE WORLD.



### 无锡市天牛智能装备有限公司

Wuxi Tianniuzhineng Intelligent Equipment Co., Ltd.

### 安徽天牛智能装备有限公司

Anhui Tianniuzhineng Intelligent Equipment Co., Ltd.

### 合肥方不圆科技有限公司

Hefei Fangbuyuan Technology Co., Ltd.

### 沙市轻工机械有限公司

Shashi Light Ind. Machinery Co., Ltd.

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## 流体涂布装备 V2024.03

Water/Solvent-based fluid coating machine

无锡市天牛智能装备有限公司

Wuxi Tianniuzhineng Intelligent Equipment Co., Ltd.



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# COMPANY PROFILE

## 公司简介

无锡市天牛智能装备有限公司成立于2006年6月，坐落于风景秀丽、交通发达的良渚文化发祥地—江阴市璜土镇。目前拥有专业的研发、制造、销售团队100多人，工程技术人员20多人。

天牛智能装备有限公司是行业领先的涂布装备制造企业，以国际先进同行为标杆，致力于推动涂布技术的应用与发展，打造国内一流的涂布与复合装备。工厂整体布局合理：拥有业内先进的涂布复合实验室；进口的德马吉、马扎克加工中心，日本岡本高精度平面磨床等机加工设备；设施齐全的标准化厂房。

公司理念：公司创始人周耐龙先生提出“以国际标准为标杆，以市场需求为导向，提供专业的团队服务，打造精细的生产装备。”

公司发展战略：关注行业痛点，集涂布与复合装备的研发、生产于一体，以天牛系列高效精密涂布装备助力行业持续发展。



Wuxi Tianni Intelligent Equipment Co., LTD. was founded in June 2006, and is now located in Huangtu Town, Jiangyin City. As a birthplace of Liangzhu culture, you can find beautiful scenery and developed traffic here. At present, There are more than 100 professional R & D, manufacturing and sales personnel in this team, with more than 20 engineering and technical personnel.

Tianni Intelligent Equipment Co., Ltd. is a leading coating equipment manufacturing enterprise in the industry. It is committed to promoting the application and development of coating technology and creating domestic first-class coating and lamination equipment with international advanced benchmarking. The overall layout of the factory is reasonable, and it's a fully equipped standardized plant. Tianni is equipped with the industry's advanced coating and lamination laboratory; imported Demage and Mazak machining center;OKAMOTO high-precision surface grinding machine and other machining equipment.

Company philosophy: Mr. Zhou Nailong, the founder of the company, put forward 'demanding ourselves with international standards, satisfying customers with market demand, better professional team service, and higher precision production equipment'.

Company development strategy: pay attention to the pain points of the industry, set the research and development and production of coating and lamination equipment in one, and help the sustainable development of the industry with Tianni series efficient precision coating equipment.

# DEVELOPMENT HISTORY

## 发展历程

### 2020 年

芜湖购100亩地, 2022年初建成并正式投用  
Wuhu purchases 100 acres of land, which will be completed and officially put into use in early 2022

### 2023 年

入股沙市轻工, 向中高端纸张涂布及整饰拓展  
Become a shareholder of Shashi Light industry and expand into mid to high end paper coating and finishing

### 2014 年

研发生产气浮烘箱, 以及流体类涂布设备  
Research and development of air flotation ovens and fluid coating equipment

### 2016 年

新购置2万平厂房, 正式搬入无锡江阴新工厂  
Newly purchased 2000 square meters of factory building, officially moved into the new factory in Jiangyin, Wuxi

### 2001 年

公司创始人周耐龙先生正式进入涂布机行业  
Mr. Zhou Nailong, the founder of the company, officially entered the coating machine industry

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## TN-FOP-1750-100

油性双面胶涂布机

TN-FOP-1750-100 Double-sided Solvent-based Adhesive Coating Machine



### 应用领域 //

- ◆ 纸类、布类、金属箔、膜类基材涂油性胶。

### 特点 //

- ◆ 逗号刮刀直刮或转移涂布；
- ◆ 最高线速度: 100m/min;
- ◆ 涂布量: 逗号直刮30~2000微米(湿量); 逗号转移20~500微米(湿量);
- ◆ 涂布宽度: 600~1650mm;
- ◆ 标配: 直径1200双工位圆盘翻转式气胀轴收放卷, 不减速自动换卷; 蚌壳式烘箱(加热方式: 蒸汽、导热油或电加热可选);
- ◆ 选配: 除尘机构、电晕处理、在线厚度测量;
- ◆ 标准辊面宽度: 1200、1450、1750mm, 其它宽度可非标定制。

### Application area //

- ◆ Coating solvent-based adhesive on paper, cloth, metal foil, and film substrates

### Features //

- ◆ Comma scraper or transfer coating;
- ◆ Maximum linear velocity: 100m/min;
- ◆ Coating weight: comma scraper 30~2000um (wet); comma transfer 20~500um (wet);
- ◆ Coating width: 600~1650mm;
- ◆ Standard configuration: turret unwinder and rewinder with air shaft (with a diameter of 1200mm), which allows auto-splicing without deceleration, clamshell drying oven (heating method: steam, thermal oil or electric heating);
- ◆ Optional: dust removal mechanism, corona treatment, online thickness measurement;
- ◆ Standard roller width: 1200, 1450, 1750mm, non-standard widths can be customized.

# TN-FWP-1750-300

水胶涂布机普通机型

TN-FWP-1750-300 General Model Of Water-based Adhesive Coating Machine



## 应用领域 /

- ◆ 标签胶带、广告耗材行业：纸基或膜类基材涂水性胶。

## 特点 /

- ◆ 封闭刮腔斜网纹涂布；
- ◆ 最高线速度: 300m/min;
- ◆ 涂布量: 1~100微米 (湿量) ;
- ◆ 涂布宽度: 600~1650mm;
- ◆ 标配: 直径1200双工位圆盘翻转式气胀轴收放卷, 不减速自动换卷; 蚌壳式烘箱 (加热方式: 蒸汽、导热油、电加热或天然气热风炉可选);
- ◆ 选配: 除尘机构、电晕处理、在线厚度湿度测量;
- ◆ 标准辊面宽度: 1450、1750mm, 其它宽度可非标定制。

## Application area /

- ◆ Water-based adhesive coating for paper or film substrates in the label, tape and advertising consumables industry

## Features /

- ◆ Doctor blade anilox roller coating;
- ◆ Maximum linear velocity: 300m/min;
- ◆ Coating weight: 1~100um (wet);
- ◆ Coating width: 600~1650mm;
- ◆ Standard configuration: turret unwinder and rewinder (with a diameter of 1200mm), which allows auto-splicing without deceleration; clamshell drying oven (heating method: steam, thermal oil, electric heating, and natural gas blaster stove are optional);
- ◆ Optional: dust removal mechanism, corona treatment, online thickness and moisture measurement;
- ◆ Standard roller width: 1450, 1750mm, non-standard widths can be customized.

# TN-FWP-1750-600

## 水胶涂布机高速机型

TN-FWP-1750-600 High Speed Model Of Water-based Adhesive Coating Machine



### 应用领域 //

- 标签胶带、广告耗材行业：纸基或膜类基材涂水性胶。

### 特点 //

- 封闭刮腔斜网纹涂布和帘式涂布；
- 最高线速度：斜网纹300m/min; 帘式600m/min;
- 涂布量: 1~100微米（湿量）；
- 涂布宽度: 600~1650mm;
- 标配：直径1300双工位墙板式无轴收放卷，不减速自动换卷；气浮式烘箱（加热方式：蒸汽、导热油或天然气热风炉可选）；
- 选配：除尘机构、电晕处理、在线厚度湿度测量；
- 标准辊面宽度: 1450、1750mm, 其它宽度可非标定制。

### Application area //

- Water-based adhesive coating for paper or film substrates in the label, tape and advertising consumables industry

### Features //

- Doctor blade anilox roller coating and curtain coating;
- Maximum linear velocity: anilox roller 300m/min; curtain type 600m/min;
- Coating weight: 1~100um (wet);
- Coating width: 600~1650mm;
- Standard configuration: wall panel type, shaftless turret unwinder and rewinder (with a diameter of 1300mm), which allows auto-splicing without deceleration, air flotation oven (heating method: steam, thermal oil, or natural gas blaster);
- Optional: dust removal mechanism, corona treatment, online thickness and moisture measurement;
- Standard roller width: 1450, 1750mm, non-standard widths can be customized.

## TN-FOM-1450-100

多功能涂布机

TN-FOM-1450-100 Multifunction Coating Machine



### 应用领域 /

- ◆ 光学级功能膜或胶带

### 特点 /

- ◆ 逗号刮刀涂布+微凹涂布;
- ◆ 最高线速度: 100m/min;
- ◆ 涂布量: 逗号30~2000微米 (湿量); 微凹1~50微米 (湿量);
- ◆ 涂布宽度: 600~1350mm;
- ◆ 标配: 直径800薄膜专用双工位收放卷; 高洁净蚌壳式烘箱 (加热方式: 蒸汽、导热油或电加热可选);
- ◆ 选配: 除尘机构、电晕处理、在线厚度测量、储箱、四工位小卷收卷;
- ◆ 选配: 水平布置的UV灯组, 满足UV胶光固化;
- ◆ 标准辊面宽度: 1450、1750mm, 其它宽度可非标定制。

### Application area /

- ◆ Optical functional film or tape

### Features /

- ◆ Comma knife coating and micro-gravure coating;
- ◆ Maximum linear velocity: 100m/min;
- ◆ Coating weight: comma 30~2000um (wet); micro-gravure 1~50um (wet);
- ◆ Coating width: 600~1350mm;
- ◆ Standard configuration: specific turret unwinder and rewinder for film (with a diameter of 800mm), which allows auto-splicing without deceleration, high cleanliness clamshell drying oven (heating method: steam, thermal oil, or electric heating);
- ◆ Optional: dust removal mechanism, corona treatment, online thickness measurement, storage rack;
- ◆ Optional: horizontally arranged UV lamp set, meeting UV curing requirements;
- ◆ Standard roller width: 1450, 1750mm, non-standard widths can be customized.

## TN-FOO-1450-100

OCA涂布机

TN-FOO-1450-100 OCA Coating Machine



### 应用领域 //

- 光学级功能膜或胶带

### 特点 //

- 底涂微凹涂布+面涂狭缝涂布或逗号刮刀涂布；
- 最高线速度: 100m/min;
- 涂布量: 逗号直刮30~2000微米 (湿量) ; 狹缝10~1000微米 (湿量) 微凹1~50微米 (湿量) ;
- 涂布宽度: 600~1350mm;
- 标配: 直径800薄膜专用双工位收放卷; 高洁净蚌壳式烘箱 (加热方式: 蒸汽、导热油或电加热可选) ;
- 选配: 除尘机构、电晕处理、在线厚度测量、储箱;
- 标准辊面宽度: 1450, 1750mm, 其它宽度可非标定制。

### Application area //

- Optical functional film or tape

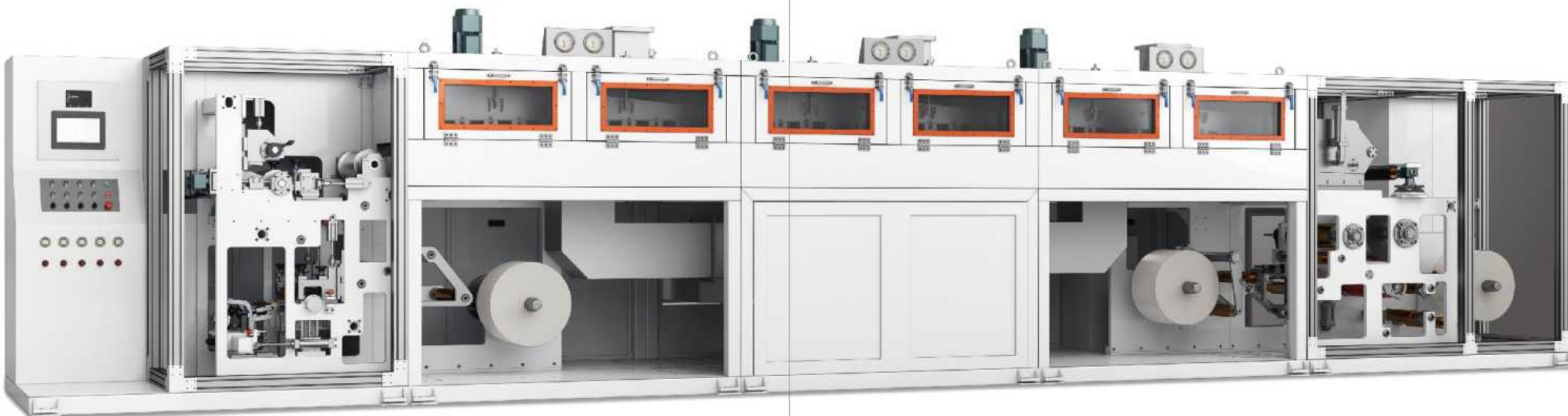
### Features //

- Primer with micro-gravure coating and top with slot die coating or comma coating;
- Maximum linear velocity: 100m/min;
- Coating weight: comma 30~2000um (wet); slot die 10~1000um (wet); micro-gravure 1~50um (wet);
- Coating width: 600~1350mm;
- Standard configuration: specific turret unwinder and rewinder for film (with a diameter of 800mm), high cleanliness clamshell drying oven (heating method: steam, thermal oil, or electric heating);
- Optional: dust removal mechanism, corona treatment, online thickness measurement, storage rack;
- Standard roller width: 1450, 1750mm, non-standard widths can be customized.

## TN-FE-400-20

### 多功能实验涂布机

TN-FE-400-20 Multi functional experimental coating machine



#### 应用领域 //

- ◆ 多功能实验涂布。

#### 特点 //

- ◆ 微凹涂布+逗号刮刀直刮兼转移涂布;
- ◆ 最高线速度: 20m/min;
- ◆ 涂布量: 逗号30~2000微米 (湿量); 微凹1~50微米 (湿量)
- ◆ 涂布宽度: 200~300mm;
- ◆ 标配: 直径500单工位固定式放卷用于底材和面材; 直径500单工位固定式收卷; 电加热烘箱 (可选配高洁净);
- ◆ 选配: 电晕处理、UV固化;
- ◆ 全伺服控制。

#### Application area //

- ◆ Multi-functional experimental coating

#### Features //

- ◆ Micro-gravure coating and comma knife coating with transfer coating;
- ◆ Maximum linear velocity: 20m/min;
- ◆ Coating weight: comma 30~2000um (wet); micro-gravure 1~50um (wet);
- ◆ Coating width: 200~300mm;
- ◆ Standard configuration: turret unwinder and rewinder for linear and face material (with a diameter of 500mm), electric heating oven (optional: high cleanliness);
- ◆ Optional: corona treatment, UV curing;
- ◆ Fully servo control.

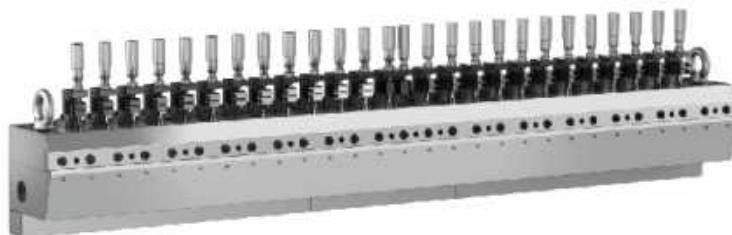
# 流体模具

## 流体模具

Coating mold

### 狭缝

Slot die



#### 技术参数:

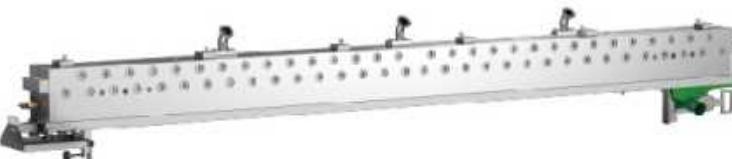
- 1) 涂布量: 10~100gsm;
- 2) 粘度: 500~3000CPS;
- 3) 运行速度: 20~200m/min;
- 4) 涂布宽度: 1100mm、1300mm、1600mm。

#### Technical parameters:

- 1) Coating weight: 10~100gsm;
- 2) Viscosity: 500~3000CPS;
- 3) Running speed: 20~200m/min;
- 4) Coating width: 1100-1600mm.

### 垂帘

Curtain type



#### 技术参数:

- 1) 涂布量: 3~40gsm(干胶);
- 2) 粘度: 100~300CPS;
- 3) 运行速度: 400~1500m/min;
- 4) 模具宽度: ≤4000mm。

#### Technical parameters:

- 1) Coating weight: 3~40gsm (dry);
- 2) Viscosity: 100~300CPS;
- 3) Running speed: 400~1500m/min;
- 4) Coating width: ≤4000mm.

### 坡流帘

Slope flow curtain



#### 技术参数:

- 1) 涂布量: 3~40gsm(干胶);
- 2) 粘度: 100~300CPS;
- 3) 运行速度: 400~1500m/min;
- 4) 模具宽度: ≤4000mm;
- 5) 可根据工艺要求制作单层及多层坡流模具。

#### Technical parameters:

- 1) Coating weight: 3~40gsm (dry);
- 2) Viscosity: 100~300CPS;
- 3) Running speed: 400~1500m/min;
- 4) Coating width: ≤4000mm
- 5) Single-layer and multi-layer slide molds can be customized.

#### 技术参数:

- 1) 涂布量: 1~100微米 (湿量);
- 2) 粘度: 1~500 mPa.s;
- 3) 线速度: 1~300m/min;
- 4) 涂布宽度: 1000~2100mm。

#### Technical parameters:

- 1) Coating weight: 1~100um (wet);
- 2) Viscosity: 1~500 mPa.s;
- 3) Velocity: 1~300 m/min;
- 4) Coating width: 1000~2100mm.



### 网纹凹版涂布头

Gravure coating head

### 微凹涂布头

Micro gravure coating head



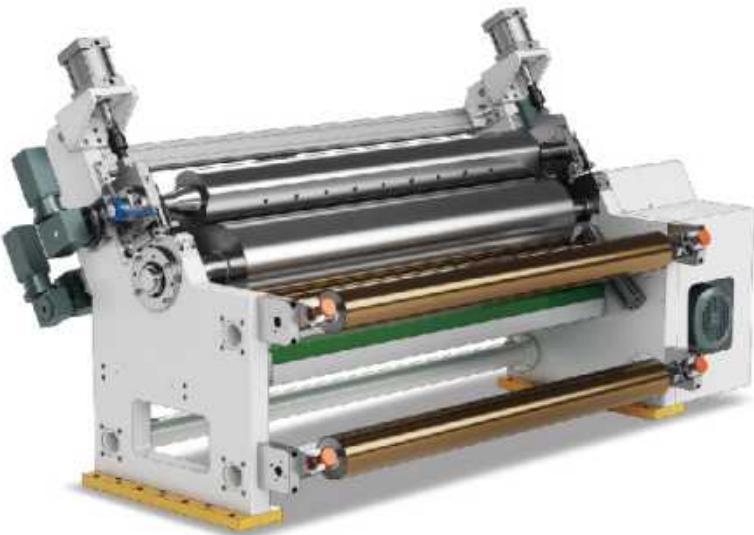
### 斜网纹涂布头

Anilox roller coating head



### 逗号刮刀涂布头

Comma scraper coating head



#### 技术参数:

- 1) 涂布量: 30~2000 微米 (湿量);
- 2) 粘度: 300~100000 mPa.s;
- 3) 线速度: 0.1~200m/min;
- 4) 涂布宽度: 600~1700mm;
- 5) 自动跳接头, 跳垃圾;
- 6) 涂胶厚度自动测量自动补偿。

#### Technical parameters:

- 1) Coating weight: 30~200um (wet);
- 2) Viscosity: 300~100000 mPa.s;
- 3) Velocity: 0.1~200 m/min;
- 4) Coating width: 600~1700mm;
- 5) Automatic splice and waste disposal;
- 6) Automatic glue thickness measurement and compensation;

### 多辊油胶涂布头

Multi-roller coating head for solvent-based adhesive



#### 技术参数:

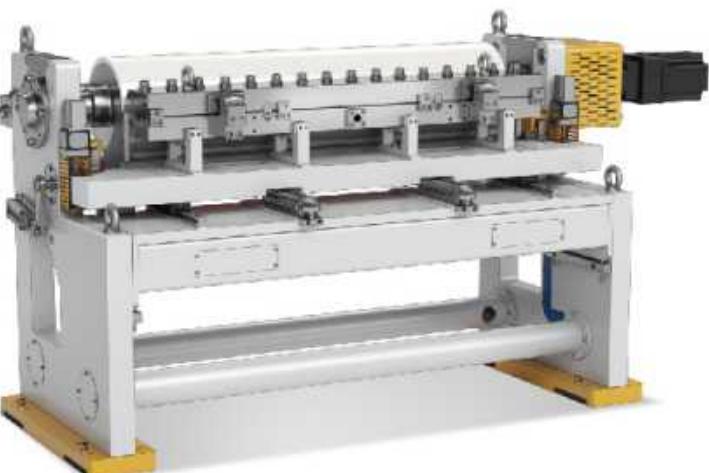
- 1) 涂布量: 50~500微米 (湿量);
- 2) 粘度: 5000~50000 mPa.s;
- 3) 线速度: 1~250m/min。

#### Technical parameters:

- 1) Coating weight: 50~500um (wet);
- 2) Viscosity: 5000~50000 mPa.s;
- 3) Velocity: 1~250m/min,

### 狭缝涂布头

Slot die coating head



#### 技术参数:

- 1) 狹缝模具: 水平或斜45度布置;
- 2) 涂布量: 10~1000微米 (湿量);
- 3) 粘度: 100~50000 mPa.s;
- 4) 线速度: 1~200m/min;
- 5) 选配: 真空吸附负压腔。

#### Technical parameters:

- 1) Slot die: horizontal or 45-degree inclined;
- 2) Coating weight: 10~1000um (wet);
- 3) Viscosity: 100~50000 mPa.s;
- 4) Velocity: 1~200m/min;
- 5) Optional: vacuum suction negative pressure chamber.

### 帘式涂布头

Curtain type coating head



#### 技术参数:

- 1) 模具: 垂帘或坡流帘;
- 2) 涂布量: 5~50微米 (湿量);
- 3) 粘度: 50~500 mPa.s;
- 4) 线速度: 300~1000m/min;
- 5) 选配: 负压腔。

#### Technical parameters:

- 1) Mold: curtain or slide curtain;
- 2) Coating weight: 5~50um (wet);
- 3) Viscosity: 50~500 mPa.s;
- 4) Velocity: 300~1000m/min;
- 5) Optional: negative pressure chamber.

## 标准圆盘收放卷

### 1200标准圆盘收放卷

1200 Disk Type Turret Unwinder And Rewinder



#### 技术参数 /

- ◆ 最大收放卷直径: Φ1200mm;
- ◆ 放卷最小接卷直径: Φ500mm;
- ◆ 上下接纸;
- ◆ 双侧气顶装夹, 3或6寸气胀轴;
- ◆ 浮辊张力控制;
- ◆ 收卷内压辊可选配;
- ◆ 宽度: 1450、1750, 其它宽度亦可询盘;
- ◆ 线速度: 100~500m/min;
- ◆ 齿轮盘回转速度: 1RPM。

#### Technical parameters /

- ◆ Maximum unwinder and rewinder diameter: Φ1200mm;
- ◆ Minimum splicing diameter for unwinder: Φ500mm;
- ◆ Up and bottom paper splicing;
- ◆ Dual-side pneumatic clamping, 3" or 6" air shaft;
- ◆ Dancing roller tension control;
- ◆ Internal pressure roller for rewinder is optional;
- ◆ Width: 1450, 1750mm, other widths can be customized;
- ◆ Velocity: 100~500m/min;
- ◆ Gear disk rotation speed: 1RPM.

### 1300墙板式无轴收放卷

1300 Wall Panel Type Shaftless Turret Unwinder And Rewinder



#### 技术参数 /

- ◆ 最大收放卷直径: Φ1300mm;
- ◆ 放卷最小接卷直径: Φ400mm;
- ◆ 上下接纸;
- ◆ 3或6寸气胀夹头或机械顶胀夹头;
- ◆ 浮辊张力控制;
- ◆ 收卷内压辊;
- ◆ 宽度: 1450, 1750, 其它宽度亦可询盘;
- ◆ 线速度: 250~650m/min;
- ◆ 接纸辊可选配驱动机构, 主动防止划伤;
- ◆ 齿轮盘回转速度: 1RPM。

#### Technical parameters /

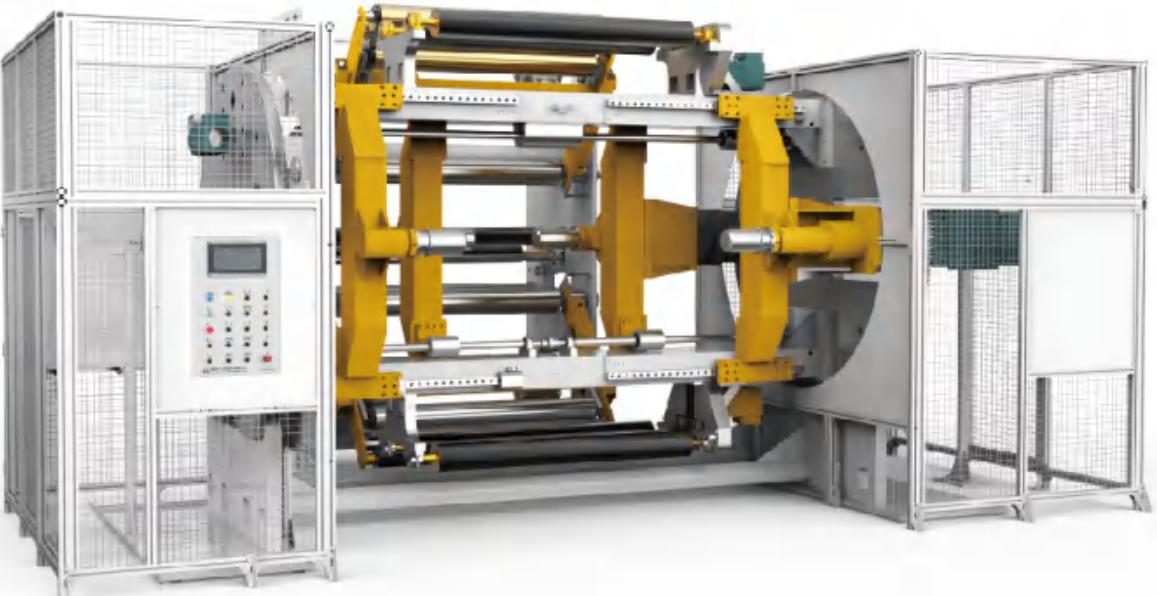
- ◆ Maximum unwinder and rewinder diameter: Φ1300mm;
- ◆ Minimum splicing diameter for unwinder: Φ400mm;
- ◆ Up and bottom paper splicing;
- ◆ 3" or 6" pneumatic expansion chuck or mechanical expansion chuck;
- ◆ Dancing roller tension control;
- ◆ Internal pressure roller for rewinder;
- ◆ Width: 1450, 1750mm, other widths can be customized;
- ◆ Velocity: 250~650m/min;
- ◆ Optional: active splicing roller equipped with a drive mechanism; can help prevent scratches;
- ◆ Gear disk rotation speed: 1RPM.

## 墙板式无轴收放卷

# 框架式无轴收放卷

## 1500框架式无轴收放卷

1500 Frame Type Shaftless Rurret Unwinder And Rewinder



### 技术参数

- ◆ 最大收放卷直径: Φ1500mm;
- ◆ 放卷最小接卷直径: Φ500mm;
- ◆ 上下接纸;
- ◆ 3或6寸气胀夹头或机械顶胀夹头;
- ◆ 浮辊张力控制;
- ◆ 收卷内压辊;
- ◆ 宽度: 1450、1750, 其它宽度亦可询盘;
- ◆ 线速度: 250~650m/min;
- ◆ 接纸辊可选配驱动机构, 主动防止划伤;
- ◆ 齿轮盘回转速度: 1RPM。

### Technical parameters

- ◆ Maximum unwinder and rewinder diameter: Φ1500mm;
- ◆ Minimum splicing diameter for unwinder: Φ500mm;
- ◆ Up and bottom paper splicing;
- ◆ 3" or 6" pneumatic expansion chuck or mechanical top expansion chuck;
- ◆ Dancing roller tension control;
- ◆ Internal pressure roller for rewinder;
- ◆ Width: 1450, 1750mm, other widths can be customized;
- ◆ Velocity: 250~650m/min;
- ◆ Optional: active splicing roller equipped with a drive mechanism can help prevent scratches;
- ◆ Gear disk rotation speed: 1RPM.

## 1000薄膜收放卷

1000 Turret Unwinder And Rewinder For Film



### 技术参数:

- ◆ 1) 最大收放卷直径: Φ1000mm;
- ◆ 2) 放卷最小接卷直径: Φ200mm;
- ◆ 3) 上下接膜;
- ◆ 4) 张力传感器控制;
- ◆ 5) 3或6寸气胀轴和无轴夹头兼顾;
- ◆ 6) 收卷内压辊;
- ◆ 7) 宽度: 1450、1750, 其它宽度亦可询盘;
- ◆ 8) 线速度: 100~300m/min;
- ◆ 9) 接纸辊主动, 防止划伤;
- ◆ 10) 齿轮盘回转速度: 1RPM;
- ◆ 11) 薄膜专用。

### Technical parameters:

- ◆ Maximum unwinder diameter: Φ1000mm;
- ◆ Minimum splicing diameter for unwinder: Φ200mm;
- ◆ Up and bottom film splicing;
- ◆ Tension sensor control;
- ◆ 3" or 6", compatible with both pneumatic expansion shafts and shaftless chucks;
- ◆ Internal pressure roller for rewinder;
- ◆ Width: 1450, 1750mm, other widths can be customized;
- ◆ Velocity: 100~300m/min;
- ◆ Optional: active splicing roller equipped with a drive mechanism can help prevent scratches;
- ◆ Gear disk rotation speed: 1RPM; Specifically for films.

## 800薄膜收放卷

800 Turret Unwinder And Rewinder For Film



### 技术参数:

- ◆ 1) 最大收放卷直径: Φ800mm;
- ◆ 2) 放卷最小接卷直径: Φ300mm;
- ◆ 3) 上下接膜;
- ◆ 4) 浮辊张力控制;
- ◆ 5) 安全卡盘装夹, 3或6寸气胀轴;
- ◆ 6) 宽度: 1450、1750, 其它宽度亦可询盘;
- ◆ 7) 线速度: 100~300m/min;
- ◆ 8) 接纸辊主动, 防止划伤;
- ◆ 9) 齿轮盘回转速度: 1RPM;
- ◆ 10) 薄膜专用。

### Technical parameters:

- ◆ Maximum unwinder diameter: Φ800mm;
- ◆ Minimum splicing diameter for unwinder: Φ300mm;
- ◆ Up and bottom film splicing;
- ◆ Dancing roller tension control;
- ◆ Safety chuck clamping, with 3" or 6" pneumatic expansion shafts;
- ◆ Width: 1450, 1750mm, other widths can be customized;
- ◆ Velocity: 100~300m/min;
- ◆ Optional splicing knife or active rotary knife for paper cutting;
- ◆ Gear disk rotation speed: 1RPM;
- ◆ Specifically for films.

## 单工位放卷

Hydraulic Unwinder



### 技术参数:

- ◆ 最大放卷直径: Φ1200mm;
- ◆ 停机放卷接纸, 配备划切接纸平台;
- ◆ 卷材下出;
- ◆ 张力检测辊;
- ◆ 3或6寸气胀或机械顶胀夹头;
- ◆ 宽度: 1450、1750, 其它宽度亦可询盘;
- ◆ 线速度: 100~300m/min;
- ◆ 液压提升、液压缸夹持;
- ◆ 气动刹车或主动电机可选。

### Technical parameters:

- ◆ Maximum unwinder diameter: Φ1200mm;
- ◆ Stop for splicing, equipped with a cutting and splicing platform;
- ◆ Coil material exits from the bottom;
- ◆ Tension detection roller;
- ◆ 3" or 6" pneumatic or mechanical top expansion chuck;
- ◆ Width: 1450, 1750mm, other widths can be customized;
- ◆ Velocity: 100~300m/min;
- ◆ Hydraulic lifting, hydraulic cylinder clamping;
- ◆ Optional: pneumatic brake or active motor.

### 技术参数:

- ◆ 最大放卷直径: Φ1200mm;
- ◆ 停机放卷接纸, 配备划切接纸平台;
- ◆ 卷材下出;
- ◆ 张力检测辊;
- ◆ 3或6寸气胀轴;
- ◆ 宽度: 1450、1750, 其它宽度亦可询盘;
- ◆ 线速度: 100~250m/min;
- ◆ 传动链条提升;
- ◆ 磁粉制动器。

### Technical parameters:

- ◆ Maximum unwinder diameter: Φ200mm;
- ◆ Stop for splicing, equipped with a cutting and splicing platform;
- ◆ Coil material exits from the bottom;
- ◆ Tension detection roller;
- ◆ 3" or 6" pneumatic expansion shafts;
- ◆ Width: 1450, 1750mm, other widths can be customized;
- ◆ Velocity: 100~250m/min;
- ◆ Chain drive lifting;
- ◆ Magnetic powder brake.



## 单工位提升式放卷

Chain Unwinder

## 蒸汽加湿

Steam Humidification



### 技术参数:

- ◆ 蒸汽熏蒸加湿, 单双面可选;
- ◆ 通道长度: 1800mm;
- ◆ 宽度1450、1750mm, 其它宽度亦可询盘;
- ◆ 入口纸张温度: 40~60°C;
- ◆ 入口纸张含水量: 2-6%;
- ◆ 出口纸张温度: 75~85°C;
- ◆ 线速度: 100~800m/min;
- ◆ 加湿量: 1.2~1.6g/m<sup>2</sup> (40~60°C) ;
- ◆ 手控阀或电动阀可选。

### Technical parameters:

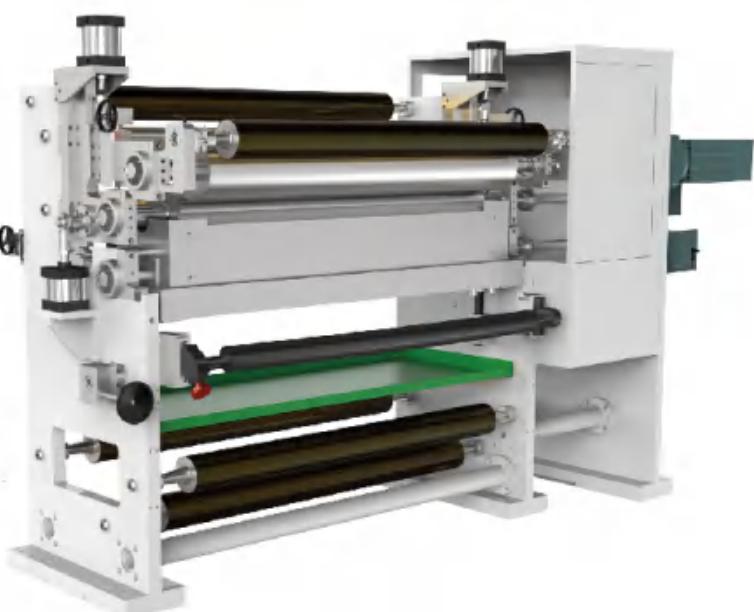
- ◆ Steam humidification, selectable for single or double-sided;
- ◆ Tunnel length: 1800mm;
- ◆ Widths available: 1450, 1750mm, other widths can be customized;
- ◆ Inlet paper temperature: 40~60°C;
- ◆ Inlet paper moisture content: 2-6%;
- ◆ Outlet paper temperature: 75~85°C;
- ◆ Velocity: 100~800m/min;
- ◆ Humidification amount: 1.2~1.6g/m<sup>2</sup> (40~60°C);
- ◆ Optional: manual or electric control valve.

### 技术参数:

- ◆ 加湿量: 5~50g/m<sup>2</sup>;
- ◆ 线速度: 100~500m/min;
- ◆ 宽度1450、1750mm, 其它宽度亦可询盘;
- ◆ 三辊独立驱动, 速比变频调节。

### Technical parameters:

- ◆ Humidification amount: 5~50g/m<sup>2</sup>;
- ◆ Velocity: 100~500m/min;
- ◆ Width: 1450, 1750mm, other widths can be customized;
- ◆ Three rollers equipped with independent drive, speed ratio adjustable through frequency conversion.



## 三辊挤压加湿

Three Roller Squeeze Humidification

# 公司专利

Company patents



# 部分合作客户

Partial cooperative clients

