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**苏州杰威尔精密机械有限公司**

SUZHOU JWELL PRECISION MACHINERY CO., LTD.



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**SCREW**

螺杆

**ROLLER**

辊筒

Suzhou Jwell Precision  
Machinery Co.,Ltd.

苏州杰威尔精密机械有限公司





A Global Supplier of Complete Solutions on Extrusion Technology

金纬机械—全球挤出技术 整体解决方案供应商

10+ 驻海外办事处 Overseas offices  
 580+ 技术研发&工程师 R&D Engineer  
 3,000+ 金纬机械员工人数 Jwell Employee  
 8+ 个制造基地 Manufacture Bases  
 500+ 独家专利技术 Patents  
 1,000,000m<sup>2</sup>+ 工厂面积 Plant Area



80年代初

金海螺第一代螺杆研制成功

In the early 1980s, the first generation screw of JINHAILUO was successfully developed

1997

上海金纬机械

Shanghai JWELL Machinery

2008

苏州金纬机械

Suzhou JWELL Machinery

2012

常州金纬机械

Changzhou JWELL Machinery

2018

贝科威尔(泰国)

Bkwell (Thailand)

2019

浙江金纬智能装备

Zhejiang JWELL Machinery

2020

金纬公司业绩突破50亿人民币

Jwell's annual sales exceeded CNY 5 billion

2021

滁州金纬机械

Chuzhou JWELL Machinery

2022

连续11年荣获中国塑料机械挤出行业排名首位

Ranked first in China's plastic machinery extrusion industry for 11 consecutive years

We Know Extrusion



SUZHOU JWELL PRECISION MACHINERY CO.,LTD.

# SCREW ROLLER

## Company profile

苏州杰威尔精密机械有限公司座落于苏州市太仓城厢工业园，是一个专业生产挤出螺杆机筒、辊筒、模具等大型及高精度精密零部件的基地,厂区占地面积300余亩，集设计研发、生产、销售、售后服务、技术支持为一体。

公司拥有100多台数控加工机床、重型加工设备以及全套的热处理流水线，采用先进的制造工艺和严格的质量管理体系，并将质量控制延伸到产品设计开发和售前售后服务的各个环节，确保产品和服务的高质量。我们将始终以技术，质量，服务的综合优势，协助用户和合作伙伴创造更多的价值。

Suzhou Jwell Precision Machinery Co.,LTD located in the Chengxiang Industrial Park,Suzhou city Jiangsu province,is a professional company for making screw and barrel, roller and other large size of high precision components.

We have many sets of CNC machines, heavy duty processing machines and complete heat treating line. We use the modern manufacturing techniques and strict quality management system, and we extend the quality controlling to R&D and pre-sale and after-sale service to ensure the high quality of machinery and service. we will always help our customers and partners to create more value by our technology,quality, service advantages.

" 品质卓越 完美如一 "

是金纬公司的质量方针，是全体员工努力方向。

" Excellent Quality, Perfect All" is Jwell' s quality policy, and all staff's working direction.

" 诚实待人 "

是我们铸就“百年金纬”的核心理念

" Be honest" is the core idea for us to contribute " Century JWELL"

# SINCE 1978

金海螺，始创于1978年，中国螺杆之乡一个响亮的品牌。将近40年的螺杆机筒专业制造经验和历程，让我们的产品可以做到更高的精度和更好的品质，从而有效提高和改善了挤塑制品的产量和质量。不断创新、不断追求产品的完美如一，让我们的产品和服务遍布世界各地。

Jinhailuo is the best screw brand china since 1978. Nearly 40 years of experience and history in the manufacture of screw&barrel so that our products can be more high precision and better quality. Thereby effectively improving and refining the extrusion capacity and quality. Continuous innovation, the constant pursuit of the perfect product, prompt our products and services all over the world.



# Service Model

## 行业服务典范

“诚实、诚信、诚恳、永续经营”是金纬人崇高的理念。每一天，我们都在实践中探索、总结，以无限的激情投入工作，只为将更优质的服务源源不断的输送给您。

"Honesty, Integrity, Sincerity, Everlasting Enterprise" are the grand notions of JWELL people. Every day you can see our efforts and enthusiasms. Exploring new things and summarizing experiences, we aim at continually feeding you the excellent products and services.



# Pipe Series Screw

## 管材系列螺杆



该系列的螺杆主要针对各类管材挤出而设计，螺杆结构分为普通型和高效型两种，新型的高效螺杆采用分离型加屏障加混炼的结构，机筒采用分体式、内孔拉螺旋槽的结构,能够大大提高生产线的挤出效率，同时对螺杆进行高耐磨碳化钨处理。

This series of screw designed mainly for all kinds of pipe extrusion, screw structure is divided into regular and efficient type two kinds, a new type of high efficient screw using separation type plus barrier and mixed structure, machine barrel adopts the split type, the structure of the spiral groove inside hole, can greatly improve the efficiency of the extrusion production line.the screw is treated with high wearresistant tungsten carbide meanwhile.



### 主要应用领域

HDPE/MDPE供水管及燃气管，PE、PP等聚烯烃类供水、燃气管，PPR/PE-RT/PEX等小口径管材, PE/PP波纹管等。

### The main applicatons

HDPE/MDPE water supply and gas pipe, PE, PP and other polyolefins, such as water supply, gas pipe, PPR/ PE - RT/PEX, small tubes,PE/PP DWC pipes etc.



# Plate, Sheet, Film Series Screw

## 片板膜系列螺杆



该系列的螺杆主要针对片材、板材和膜类产品的挤出而设计，针对不同类的片板膜产品采用专业化的螺杆设计。片板类产品可采用排气式的螺杆，膜类螺杆通常采用结构复杂的分离型或屏障型螺杆。

This series of screw is designed for extruding of plates, sheet and membrane products, and it is designed for different types of plate membrane products. The plate type products can adopt the venting type screw, the membrane screw usually adopts the structure complex separation type or the barrier type screw.

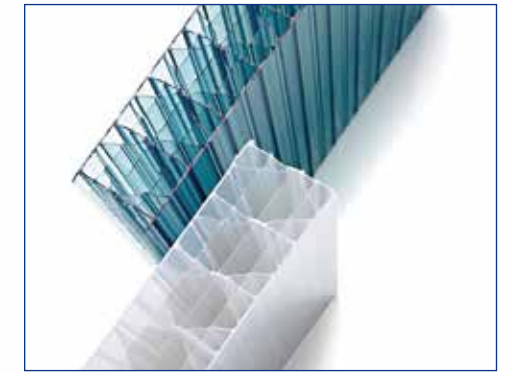


### 主要应用领域

PE防水卷材，PET片材，PP/PE/PS环保吸塑包装片，ABS/PMMA 复合洁具板，ABS/HIPS/GPPS 冰箱板，PC/PP/PE 中空格子板，PE铝塑板，PE/PP包装膜、流延膜等。

### The main applicatons

PE waterproof membrane, PETsheet,PP/PE/PS environmental thermoforming package, ABS/PMMA composite sanitary ware, ABS/HIPS/GPPS refrigerator plate, PC/P-P/PE hollow cross section board, PE aluminum composite sheet, PE/PP package&cast film etc.



# Blow Molding Series Screw

## 中空吹塑系列螺杆



该系列的螺杆主要针对中空吹塑系列产品的挤出而设计，针对不同类的中空吹塑产品采用专业化的螺杆设计，采用屏障加混炼的结构设计，保证螺杆挤出稳定和极佳的塑化效果。



### 主要应用领域

各种规格的机油壶、润滑油壶、冷却水箱，各种规格的汽车座椅、随车工具箱、风道风管、导流板、保险杠、尾翼等，各类异形管件制品，吹塑托盘类产品，各种堆码桶，化工包装桶等。

### The main applicatons

All kinds of machine oil pot, oil pot, cooling water tank, all kinds of car seats, the accessory kit, duct, guide plate, bumper and rear wing, all kinds of special-shaped pipe fittings products, blow molding tray products, all kinds of stacking bucket, chemical packaging barrels, etc.



The series of screw is manily in view of the designed extrusion blow molding products, aiming at different kinds of blow molding products adopt professional screw design. Uses the barrier and the structure design of the mixing ensure screw extrusion stability and excellent plasticizing effect.



# Chemical Fiber Series Screw

## 化纤系列螺杆

化纤系列的螺杆主要针对各类化纤纺丝设计，螺杆采用 LTM 型销钉设计，挤出稳定，塑化均匀。

The screw of chemical fiber series is designed for various kinds of chemical fiber spinning, and the screw is designed as LTM pin, extruding stability and plasticizing uniformity.



### 主要应用领域

涤纶、锦纶、氨纶、丙纶纺丝。

### The main applicatons

Polyester, nylon, spandex, polypropylene spinning.



# Granulator Series Screw

## 造粒系列螺杆

造粒系列螺杆主要针对各类废旧塑料的回收利用，螺杆结构主要采用排气式的设计，在挤出过程中能有效地排出物料中的水份和挥发物气体，有利于粒子质量的稳定。

Granulator series screw is mainly aimed at all kinds of waste plastic recycling, screw structure mainly adopts the design of exhaust type, can effectively discharge in extrusion process material moisture and volatile matter in the gas, is conducive to the stable quality of particles.



### 主要应用领域

包括PE/PP等管材、厚板材破碎料造粒，PS/ABS/PET等片材破碎料造粒，PE/PP薄膜、编织袋造粒，PA/PET等废丝料造粒等。

### The main applicatons

Include PE/PP, pipe, thick board recycling material pelletizing PS/ABS/PET sheet recycling material pelletizing PE/PP film、woven bag recycling material pelletizing PA/PET waste yarn pelletizing.



# Conical Twin-screw

## 锥形双螺杆



该系列的螺杆主要针对PVC类产品而设计，锥形双螺杆转速低，物料在机筒内的剪切作用稳定、均匀，螺杆较短，物料停留时间短，特别适合热敏性物料的塑化成型加工。

This series screw designet for PVC products mainly, conical twin screw rotate in lower speed, the material inside the barrel under a stable and uniform shear, shorter screw, shorter duration time of material, especially suitable for heat-sensitive material plasticizing processing.

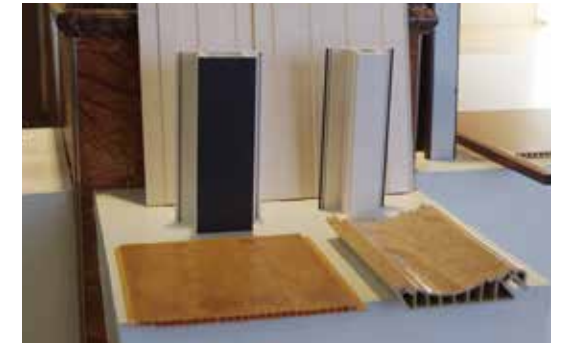


### 主要应用领域

包括PVC管材,PE/PP/PVC木塑挤出, PVC结皮发泡板, PVC异型材, PVC/PP波纹管, PVC地板革类产品, PVC防水卷材等。

### The main applicatons

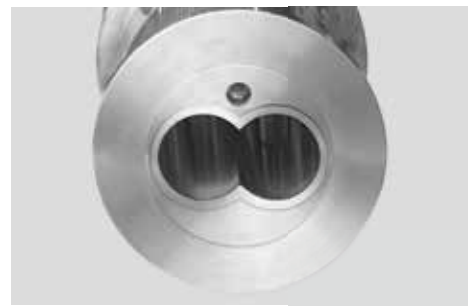
Including PVC pipe, PE/PP/PVC WPC extrusion, PVC Skining foaming plate, PVC profile, PVC/PP corrugated pipe, PVC floor leather products, PVC waterproof membrane, etc.





# Counter-rotate Parallel Twin Screw

## 异向平行双螺杆



该系列的螺杆主要由两根平行的圆柱形螺杆组成，螺杆旋向正反相反。平行双螺杆转速低，产生的热量较少，物料在机筒内的剪切作用稳定、均匀，螺杆对物料的输送能力强，同时具有较好的排气效果，有利于产品质量的稳定。

The screw of the series consists mainly of two parallel cylindrical screws, which rotate to the opposite direction. Parallel double screw rotational speed is low, less heat, shear stability of the materials in the barrel, uniform, screw for material conveying ability is strong, have good exhaust effect at the same time, is conducive to the stability of product quality.

### 主要应用领域

包括PVC管材、型材的挤出, PE/PP片板类产品等。

### The main applicatons

Includes PVC pipe & profile extrude, PP/PE sheet product.



# Alloy Series

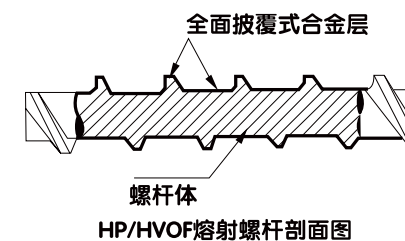
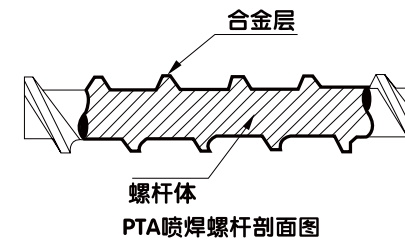
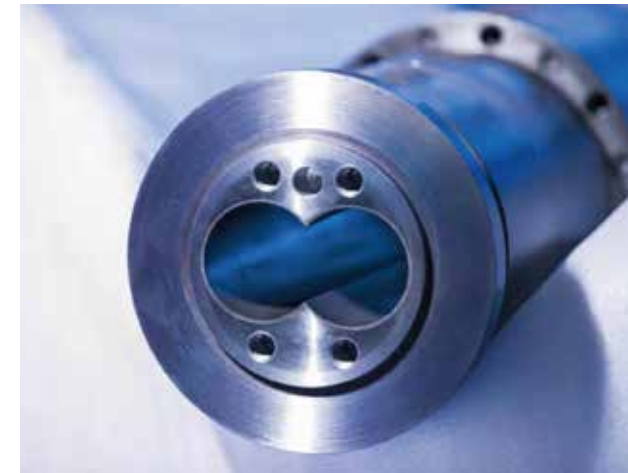
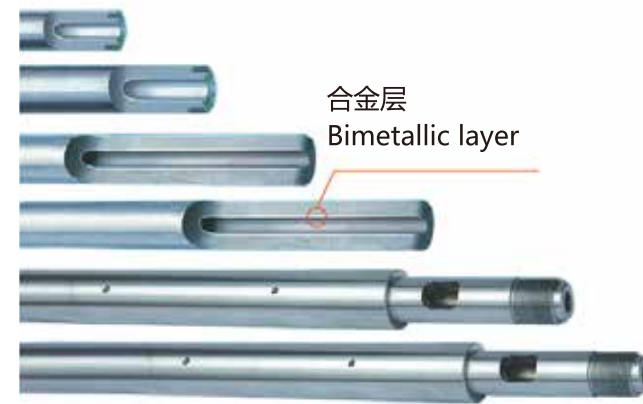
## 合金系列



双合金溶胶机筒方面，从以往的合金含钨10%提升至含碳化钨30%及50%，可加工长度增加从3000mm提升至4000mm。

In the case of bimetallic barrel for melt, the carbon tungsten containing has been raised from the previous 10% to 30% and 50% now, the processing length increased from 3000mm to 4000mm.

双金属机筒基材料:45#40r  
 双金属方式: 离心浇注  
 用途区分: 注塑成型机械用/挤出机械用  
 加工范围: 内径Φ12-Φ300mm  
 有效长度:12000mm  
 氮化深度: 0.50mm-0.80mm  
 氮化硬度:HV960以上  
 直线度: 0.015mm/m  
 镀铬厚度: 0.02mm-0.085mm  
 适用塑胶范围: 普通塑料PP、PE、ABS、AS、PS等  
 材质成分:SACM645、SCM440、38CrMoALA

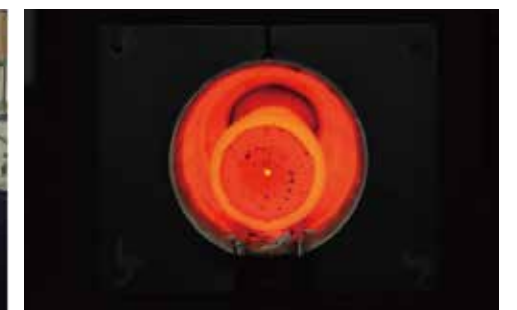


双合金螺杆也从以往的PTA牙顶喷焊，更新设备采用高压速（HP/HVOF）全面合金披覆的熔射技术。WPT1耐腐蚀型合金适用于尼龙PVC、PC、PMMA等，WPT2耐磨耐高温型合金适用于尼龙玻纤、磁粉、铝镁粉、电木注塑等，WPT3兼有WPT1、WPT2两种特性，耐磨耐腐蚀性耐高温。

JWELL adopts new generation technology HP/HVOF totally bimetallic coating spraying instead of PTA ridge spraying welding. WPT1 anti-corrosion type application: nylon, PVC, PC, PMMA etc. WPT2 resistant wearing and high temperature application: nylon with glass fiber magnetic powder, Al Mg powder, Bakelite injection and etc. WPT3 has WPT1 and WPT2 advantages.

Base material of bimetallic barrel:  
 Bimetallic type:  
 Application:  
 Products range:  
 Effective length:  
 Nitriding layer thickness:  
 Nitriding layer hardness:  
 Straightness:  
 Chrome coated layer:  
 Suitable plastic material:  
 Screw base material:

45#40r  
 centrifugal casting  
 for injection molding machine and extrusion machine  
 inner diameter Φ12-Φ300mm  
 12000mm  
 0.50mm-0.80mm  
 HV960  
 0.015mm/m  
 0.02mm-0.085mm  
 PP、PE、ABS、AS、PS etc.  
 SACM645、SCM440、38CrMoALA



# Injection Machine Screw

## 注塑机螺杆



注塑螺杆是塑料注塑机的核心部件，通常螺杆包含螺杆头和止逆环，机筒包含前体和射嘴。螺杆结构的通用性比较强，通常为普通三段式螺杆，为提高塑化能力可设计成屏障型或分离型螺杆机构。

The injection screw is the core part of plastic injection molding machine, and usually the screw consists of screw head and check ring, and the barrel contains the front and nozzle. The use of screw structure is strong, and it is usually a regular three-stage screw, which can be designed as a barrier type or separating screw mechanism to improve the plasticizing ability.

注塑螺杆主要应用领域为各类注塑制品的生产加工，包括PE、PVC、PP、PC、PA、PET等物料的加工。

The main application of injection molding screw is the processing of various kinds of injection molding products, including PE,PVC,PP,P-C,PA,PET, etc.



# Our Ability In Roller Making

## 我们的辊筒制造能力

苏州杰威尔精密机械有限公司在辊筒和表面精制领域积累了丰富的经验，与你共享。我们的经验涉及塑料片材薄膜加工、无纺布、皮革加工、造纸、印刷业和钢铁制造（薄型片材）等领域。在这里，无论是辊筒的几何尺寸，圆周度，表面光洁度，还是使用寿命，我们都力求达到最高的性能指标。

Suzhou Jwell Precision Machinery Co.,Ltd would like to share our many years'rich experi-ence in the roller and surface refine area.Our products are widely used in plastic sheet and film processing, non-woven fabric, leather processing, paper making, printing,thin steel manufac-turingetc. We are trying our best to reach the highest performance index for the geometry dimensions,roundness,roughness of the surface and the using life.

- 辊筒最大直径和长度：Φ1600×14000mm
- 工件最大重量：20000kg
- 圆柱度、同心度精度：≤0.01mm
- 表面粗度：0.005~0.01 μ m
- Max. diameter and length of the roller: Φ1600×14000mm
- Max. weight of the roller: 20000kg
- Roundness and coaxiality:≤ 0.01mm
- Roughness of the surface : Ra 0.005~0.01 μ m



# Super Mirror Roller

## 超级镜面辊



### 用于光学级板材、片板、薄膜制品:

超级镜面对于光学级塑料板材、片材、薄膜生产设备来说是一个不可缺少的重要部件。其规律是：辊筒表面越光，越精密，生产出的制品质量就越好。因而，我们努力达到最小的表面粗糙度公差。

生产出的光学级制品主要应用于LED面板、电子、电器工业的薄膜开关；电脑、手机液晶显示屏等高端领域。

### For optical plate, sheet, film product:

Super mirror surface roller is a key part of sheet and plate equipments. The rule is that the more smooth and precise the roller surface, the better the product quality. And, we always strike for the smallest possible surface roughness tolerance to the level of Ra0.005um.

The optics grade product is applied for producing LED panels, electronics, thin-film switch of electric appliances, and high end consumer products section like PC monitor, mobile phone screen and etc.

### 辊筒特点 Features

- 超镜面辊筒表面光洁度可以达到Ra0.005-0.01 μ m;
- 辊筒的圆柱度、同轴度均达到≤0.005mm;
- 特殊的结构设计以保障极强的辊筒刚性和表面温度误差最小;
- The surface roughness level of the roller can be reached Ra0.005-0.01 μ m;
- He (the) cylindricity and cocentricity of the roller can be reached ≤0.005mm;
- Enhanced roller rigidity and minimized roller surface temperature deviation through special roller structure design.



# Thin-Wall Efficient Roller

## 薄壁高效辊筒



薄壁高效辊筒的辊面外壳厚度仅为标准辊筒外壳厚度的50%-70%；内部减少螺棱支撑点的面积以增大冷却水的接触面积和热转换效率。为抵消辊面较薄的强度减弱，采用了整体圆弧形流道以增加承压强度。相同的工况环境，使用薄壁高效辊筒的片材设备产量增加了20%-50%。

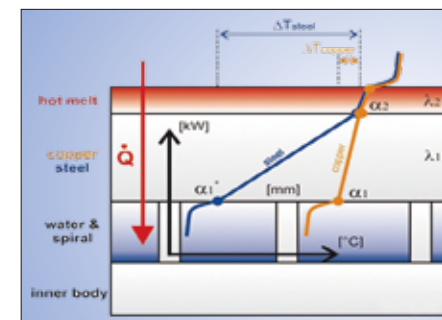
For the thin-walled high-efficiency roller, the surface shell thickness is only 50%-70% of the standard roller; by reducing the area of the strikes, and enlarging the contact area with cooling water, the thermal conversion efficiency is increased. And to offset the roller rigidity, the overall circular runner design is adopted to increase the intensity of the roller. Under the same working condition, the thin wall high efficiency roller boosted plate and sheet line output by 20% to 50%.

### 辊面处理 Roller surface treatment

- 经调质处理，确保组织结构密实
- 外表面深层次淬火，硬度达到HRC55-58
- 表面电解镀硬铬，硬度达到HRC60-62
- Quenching with Subsequent tempering, ensures the density of the structure
- Outer surface deeply quenched, the hardness can be reached HRC 55-58
- Surface electrolyze hard chromed, the hardness can be reached HRC 60-62

### 表面处理 Surface treatment

- 镜面、超镜面研磨抛光加工
- 可加工各种消光、雾面、磨砂、喷涂层等表面
- Mirror roller, super mirror roller grinding and polishing processing.
- Different kinds of roller surface treatments are available, such as leather veins, matt, mist, frosting, net veins and etc.



# Electromagnetic Heating Roller

## 电磁加热辊筒

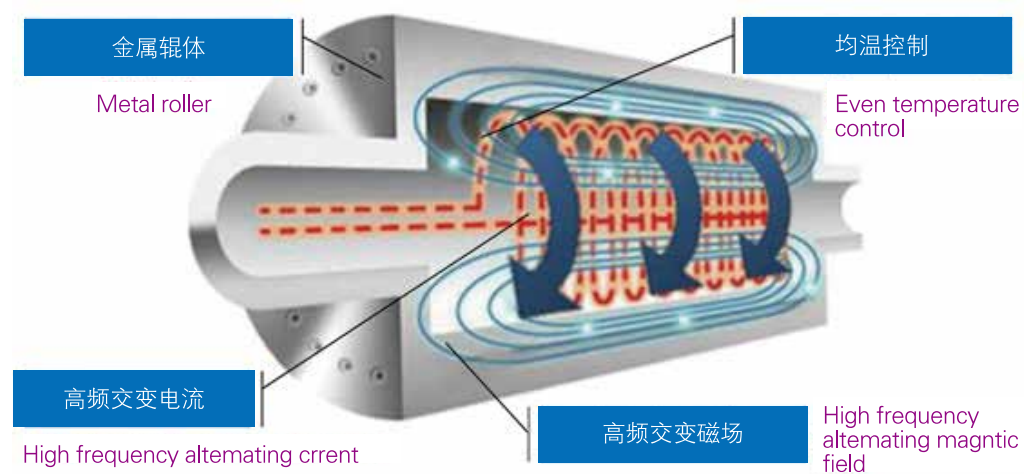


由于加热辊在各行业应用广泛，电磁加热辊正取代导热油加热辊，目前在激光防伪印刷、模压、汽车夹层玻璃复合、复合膜生产、医用胶带、药品包装、非织造无纺布生产、铝塑板胶合、化学合成纤维、橡塑压延等行业成功应用。

With the wide application of heating roller in various industries, electromagnetic heating roller is replacing heat conduction oil heating roller, so far electromagnetic heating roller is successfully used in laser anti-counterfeiting printing, die stamping, automotive laminated glass composite, composite film production, medical tape, pharmaceutical packaging, non-woven fabric production, aluminum-plastic panel agglutination, synthetic fiber, rubber and plastic calendaring and other industries.

### 辊筒特点 Features

- 节能——比导热油辊或蒸汽辊节能约 60%；
- 温控精度高——温控精度达  $\pm 0.5^{\circ}\text{C}$ ；
- 升温速度快——从室温到  $200^{\circ}\text{C}$  只需 25min；
- 工作温度高——辊面工作温度可实现  $400^{\circ}\text{C}$  以上，满足高温生产要求；
- 环保——全电气化控制，无油渍污染，生产环境清洁卫生。
- energy saving - 60% energy saving comparing with the heat conduction oil roller or steam roller;
- high precision temperature control, temperature precision reaches  $\pm 0.5^{\circ}\text{C}$ ;
- faster heating up- takes only 25 min from room temperature to  $200^{\circ}\text{C}$ ;
- high working temperature, roller surface temperature can reach above  $400^{\circ}\text{C}$  for operation, satisfies the requirement of high temperature production;
- environmental protection - all electric control, no oil pollution, clean production environment.



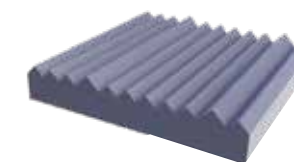
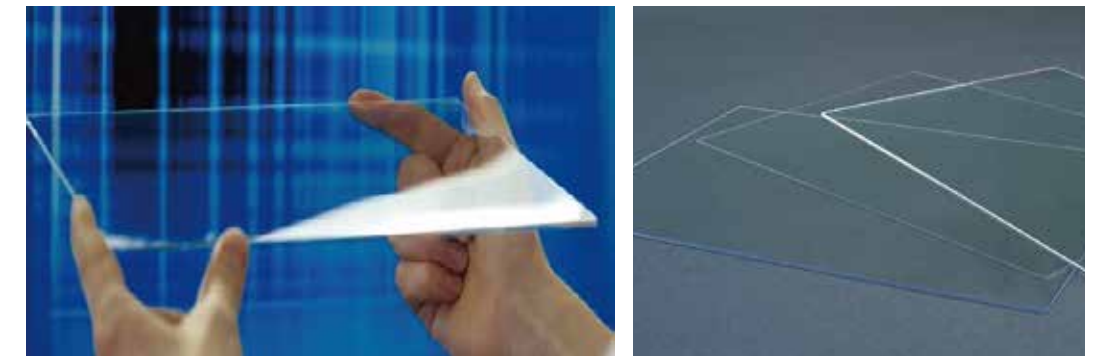
# Micro-Structure Roller for Optical Film & Sheet

## 光学膜用途微结构辊

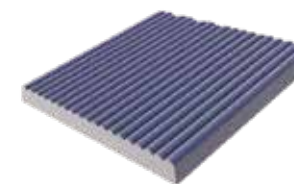


微结构辊经过在辊面镀铜、镀镍以后进行辊面微结构处理，制成高等级的光学片材或薄膜，成为LED/LCD面板的关键模块组件。制品应用于制作于LCD/LED背光的光学膜，棱镜片增光膜(prism)和微透镜膜(micro lens)，3D光栅膜，液晶显示屏、笔记本电脑、移动电话等领域。

Microstructure roller make the micro structure treat for the roller surface after the copperize, nickelage, to be the height class optics sheet or film which will be the key module parts of the LCD panel. The final product used in the LCD/LED display, mobile phone, 3D raster, prismatic lens and micro lens.



V 型结构 (正面结构)  
V type structure  
(the front side structure)



3D 结构辊  
3D structure roller



# Casting Film Roller

## 流延膜用辊筒



JWELL制造的流延膜用辊筒采用严格的欧洲专业制造标准，经过多道焊接和热处理工艺，保证辊筒的整体结构坚固可靠。

为了确保其高效的热交换效果，流延辊筒的流道均为特殊的螺旋形设计，并对通过流道的冷却液流量进行精确的计算，从而尽可能的减小辊筒表面温度误差，提高了产品的温度均匀性。

流延膜用辊筒的动平衡精度尤为重要。专用的大型动平衡校验设备和多种平衡检测方案，使其在高转速下运行平稳。

JWELL manufactured casting film roller strictly according to European professional manufacturing standards. Several steps of welding and heat treatment process are applied to give ensurance to the overall rigidity and reliability of roller structure.

In order to ensure its efficient heat exchange, casting roller flow channel are designed with the special spiral, and through accurate calculation of the coolant flow, the roller surface temperature deviation are reduced to the least possible. It improves the temperature uniformity of the product.

The most important is the precision of dynamic balancing of roller. Specialized large dynamic balance calibration equipment and a variety of balance detection scheme, ensures smooth operation at high rotation speed.



较高的生产线速度要求流延膜用辊筒具有极高的转速、精确的动平衡精度、快速均衡的热交换效率。

High speed of casting film production line means very high rotation speed of the roller, and this requires precise dynamic balancing, high and balanced heat exchange efficiency.

### 辊筒特点 Features

- 最大的辊筒直径：Φ1600mm
  - 辊筒的圆柱度、同轴度均达到≤0.005mm
  - 辊筒表面镀硬铬，镀层厚度50~80um
  - 辊筒表面温度误差±0.5~1℃
  - 表面抛光镜面、超精镜面、毛面/雾面、防粘辊面处理
  - 运行速度：最大800米/分
  - 整体变形：全负荷时<0.05毫米
  - 运行时动平衡 最佳Q=3.2
- Roller diameter: max. 1600 mm
  - Roller cylindricity, concentricity both ≤0.005mm
  - Roller surface hard chromium plated, coating thickness is 50 ~ 80 um
  - Roller surface temperature deviation ±0.5~1℃
  - roller surface treatment: mirror polished, super finishing mirror, matt, mist and anti adhesive surface
  - Speed: max. 800 m/min
  - Overall deformation: < 0.05 mm at full load
  - Best dynamic balance: Q = 3.2



# Roller for Bi-Oriented Stretch Film Production Line

## 双向拉伸膜生产线用辊筒



苏州杰威尔精密机械有限公司 不但致力于塑料板材、片材用压延辊筒的设计制造，同时也为塑料薄膜领域提供高品质的辊筒。

引进国外先进的制辊技术，我们为流延膜设备、拉伸膜设备提供高品质辊筒。如激冷辊、拉伸辊、预热辊、牵引辊、电晕辊、橡胶辊、TEFLON辊等。

生产塑料薄膜用辊筒的极高转速，使辊筒的动平衡精度显得尤为重要。专用的大型动平衡校验设备和多种平衡方法使这些要求得到有效的保证。

薄膜制品成型对辊面温度误差的要求很严格。带内螺旋循环流道的辊筒是一项高技术含量的产品，具有极强的热交换能力和辊筒作业表面容许的最小温度波动。

Suzhou Jwell Precision Machinery Co., Ltd , not only focuses on the design and manufacture of the roller of plastic plate sheet , meets the requirement of the clients, but also supplies the high quality roller for the plastic film business area.

We import the foreign advanced roller manufacture technology , supply the high quality roller for the machine of casting film and stretch film. Such as chill roller , stretch roller, preheat roller , pull roller, corona roller, rubber roller, TEFLON roller etc.

The roller rotate in higher speed when produce the plastic film , so that high precision of the roller dynamic balance is important particularly. Our specified large dynamic balance testing equipment and various balance process can ensure these request effectively.

According to the strict molding request of final film product to the temperature error on the roller surface, The roller which has the spiral inner flow channel is a high-tech product, it has a very good heat exchange ability and this roller can reach the minimum temperature fluctuation which is allowed in production.



### 我们的辊筒制造能力 Our manufacturing capacity of roller:

- 辊筒最大加工长度 Max. machining length :14000mm
- 辊筒最大加工直径 Max. machining diameter: Φ1600 mm

### 辊筒制造精度 Manufacturing precision of roller:

- 同轴度 Concentricity: ≤ 0.01mm
- 圆柱度 Cylindricity: ≤ 0.01mm
- 表面粗度 Surface roughness: Ra0.005 ~ 0.01 μm

### 辊筒表面处理 Roller surface treatment:

- 电镀硬铬涂层 Electroplate hard chrome coating
- 橡胶包覆涂层 Rubber overlay coating
- 不锈钢包覆层 Stainless steel overlay coating
- 特氟仑等特种涂层 Special coating like TEFLON etc.



由于拉伸膜辊筒对于膜张力、包覆角度、高线速度、温度精确控制等较高的要求，所以对于每个高要求辊筒都将提供以下验证：  
Due to the higher request for the tension / coated angle/ high line speed/ temperature precision control of the stretching film roller , we can provide the following certificates for each roller:

- 轴材质
- 外套材质
- 尺寸和几何报告
- 光洁度(测量辊面两边和中间)
- 镀铬硬度
- 镀铬厚度(测量辊面两端和中间)
- 最高达到 G2.5 级的平衡报告(机器打印)
- 重量, 惯性, 在极值速度, 自重情况下的挠度
- 防止渗漏的静态压力试验
- 辊面温度差异
- 冷却水流量
- 进出水压差异

- Shafts material
- Outer jacket material
- Dimension and geometrical report
- Roughness (measures on the sides and in the center of the table)
- Chrome coating hardness
- Coating thickness (measures on the sides and in the center of the table)
- Final balancing reach to G2.5 (machine Printed)
- Weight, inertia , d é flecion under own weight, critical speed
- Static pressure test to prevent the leakage
- Temperature difference on the table surface
- Cooling water flow
- Inlet/Outlet water pressure difference

# Chill Roller, Casting Roller

## 激冷辊、铸片辊



产品广泛应用于BOPP、BOPET、BOPA、BOPS、BOPI等各种双向拉伸生产线和纵向拉伸生产线的母片铸片成型，采用特殊的内部循环流道设计，提高热转换效率及温控精度，更换技术升级后的辊筒,可提高20%~30%的铸片效率。

This product is widely used in master casting forming of BOPP, BOPET, BOPA, BOPS, BOPI biaxial oriented stretching line and longitudinal stretching line. Special inner circulation channel is designed to improve the heat conversion efficiency and temperature control accuracy. After replacing with this kind of technically updated roller, the casting efficiency will rise by 20%-30%.

### 辊筒特点 Features

- 最大直径 1600mm
- 变径交错螺旋流道
- 表面温度精度  $\pm 0.5^{\circ}\text{C}$
- 高效热交换技术性能
- 高精度动平衡校正
- 超高质量的镜面处理
- 螺旋流道的防腐处理
  
- Max diameter 1600mm
- Variable diameter alternating spiral flow channel
- Surface temperature precision  $\pm 0.5^{\circ}\text{C}$
- High efficiency heat exchange technology performance
- High precision dynamic balancing correction
- High quality mirror face processing
- Anti-corrosion treatment of spiral flow channel



铸片系统是薄膜拉伸生产线中至关重要的一个环节，铸片成型的母片精度最终决定了拉伸后成品膜的质量，苏州杰威尔精密机械有限公司生产的铸片辊筒，在国内欧洲进口的高端拉伸生产线上得到了广泛的应用，经过实际应用的效果，得到了客户一致认可与好评。

Casting system is a step of of vital importance in film stretching line. The finish film quality after stretching will be finally based on master precision of casting system. This casting roller manufactured by Suzhou Jwell Precision Machinery Co.,LTD has already been used a lot in high level stretching line imported from Europe and its performance in practical application obtains unanimous approval and favorable comment from customers.





## Embossing Roller

### 精密花纹辊筒



花纹辊用于PMMA、PC 板材、PP 片等多种塑料片、板材的表面成型处理。辊面可以加工成各种花纹形式，采用激光电子扫描与分色技术，将客户来样图像转化成高清晰度数字影像信息直接录入雕刻机复制雕刻出高质量的辊面花纹。辊面花纹的仿真率高达98%以上。

在辊筒表面进行喷砂处理，按照目数的大小，使辊筒表面达到消光、亚光及雾面和毛面的效果。制品应用于灯具、装潢、皮革、汽车等多种领域。

Embossing roller is used for surface treatment of plastic sheets and boards like PMMA, PC, PP and etc. Roller surface can be processed into a variety of decorative patterns. The sample image will be converted into high resolution digital image information with laser scanning electron and color separation technology and then loaded directly into the carving machine, and high quality roller surface pattern will be carved out by the carving machine. The roller surface pattern simulation rate is above 98%.

Sandblasting processing is applied to the roller surface. According to the size of the mesh, the roller surface will have the effect of dull, matt, mist, and rough effect.

Products applied to the various fields like lighting appliances, decoration, leather products, automotive and so on.

### 辊筒特点 Features

- 辊面材料可采用45钢、38GrMoAl、42GrMo、60GrMoV等；
- 多种内部流道设计，辊面温度均匀，确保制品表面花型的均匀一致；
- 表面电镀层硬度达到HRC60-62，延长花纹辊的使用寿命。
- Roller surface material includes 45 # steel, 38GrMoAl, 42GrMo, 60GrMoV, and etc;
- Both the diversified internal runner design, and the roll surface temperature uniformity technology, ensure the uniformed pattern on the product surface;
- Surface plating hardness can be reached HRC60-62, prolong the service life of the embossing roller.



## Roller for Drainage Board and Special-shaped Surface Forming

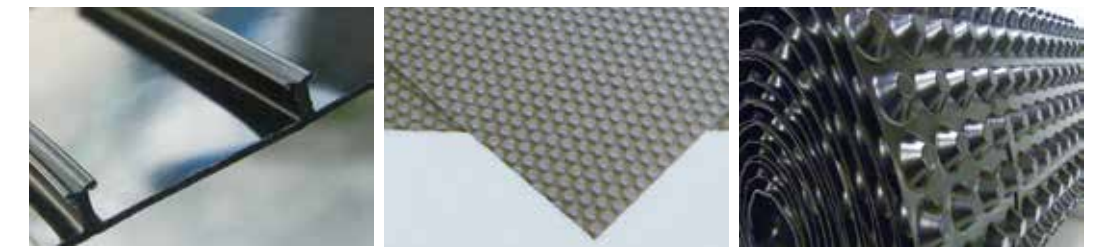
### 排水板、异形面成型辊筒



根据制品的不同用途，采用高精度的数控加工设备对辊筒表面做精密加工，并且充分考虑了制品成型过程中热胀冷缩、排气等特点。使通过异形面成型辊筒连续挤压成型的制品能够完全符合用户的需求。制品应用于排水板、蜂窝板、止水板、气泡膜等多种用途。

According to the different material of products, and with full consideration to the product expansion and contraction, and gas venting nature, etc., we use high precision CNC processing equipment for the roller surface precision machining. The precision of the special surface forming roller will help ensure the quality of product to fully meet the need of users.

Products may apply to drainage board, honeycomb panel, water stop plate, bubble wrap and other purposes.



# Hot Mill Roller

## 热轧辊



热轧辊因为其特殊的设计结构而具有较高的强度，韧性和耐热性。用于高密实度的塑料板材片材成型和无纺布加热复合。

选用优质合金钢38CrMoA1A, 42CrMo, 60CrMoV, 9Cr2Mo等作为本体材料，经机械加工、热处理成型，表面硬度可达HRC58~62。

内胆螺旋式和周边钻孔两种设计结构，采用内部安装螺旋内胆或辊体周边钻孔循环引导热油，使辊面两端温差更小，热效率更高。

Hot Mill Roller have superior strength、tenacity and heat resistance due to the special design structure. The roller can be used in high density plastic plate and sheet forming and non-woven fabric heat compounding.

The roller body select super quality alloy steel such as 38CrMoA1A, 42CrMo, 60CrMoV, 9Cr2Mo etc. The surface hardness can be reached HRC58-62 after the machining and heat treatment.

The roller inside structure design as spiral channel and circum drilling hole,the temperature difference between double sides of the roller will be smaller and the thermal efficiency will be higher.

### 辊筒特点 Features

- 辊筒整体强度高,高强度对压受力时变形小,制品厚度均匀;
- 热交换高效、均匀,辊面温度均衡稳定;
- 适用于 PC/PMMA 等较薄的塑料片材、无纺布、皮革的表面压光及压花。
- High overall intensity guarantees small deformation of roller under pressure, and ensures uniform product thickness;
- High efficiency and uniform heat exchange, stable roller surface temperature;
- Suitable for thin plastic sheet like PC/PMMA, non-woven fabrics, leather surface polishing and embossing.



# Rubber Roller

## 橡胶包覆辊筒



橡胶辊的辊面包胶有三元乙丙胶、海派龙、丁晴胶、液体硅胶、固态硅胶、聚氨酯等。根据使用的环境工况，需要满足耐油、耐溶剂的性能。橡胶面的弹性、屈曲性、冲击性、耐磨损等物理性能都影响胶辊的质量和使用寿命。

高温用途易使橡胶老化，所以在选择优质的橡胶辊面的同时，辊芯的冷却设计也非常重要。采用大通水量的螺旋流道设计，使辊面温度均匀可控。

精密的研磨加工设备确保橡胶辊面与两端轴承的同轴精度，多种静平衡、动平衡校正工序，即使在转速极高的双向拉伸薄膜等生产线设备上使用也能够稳定、高效的运转。

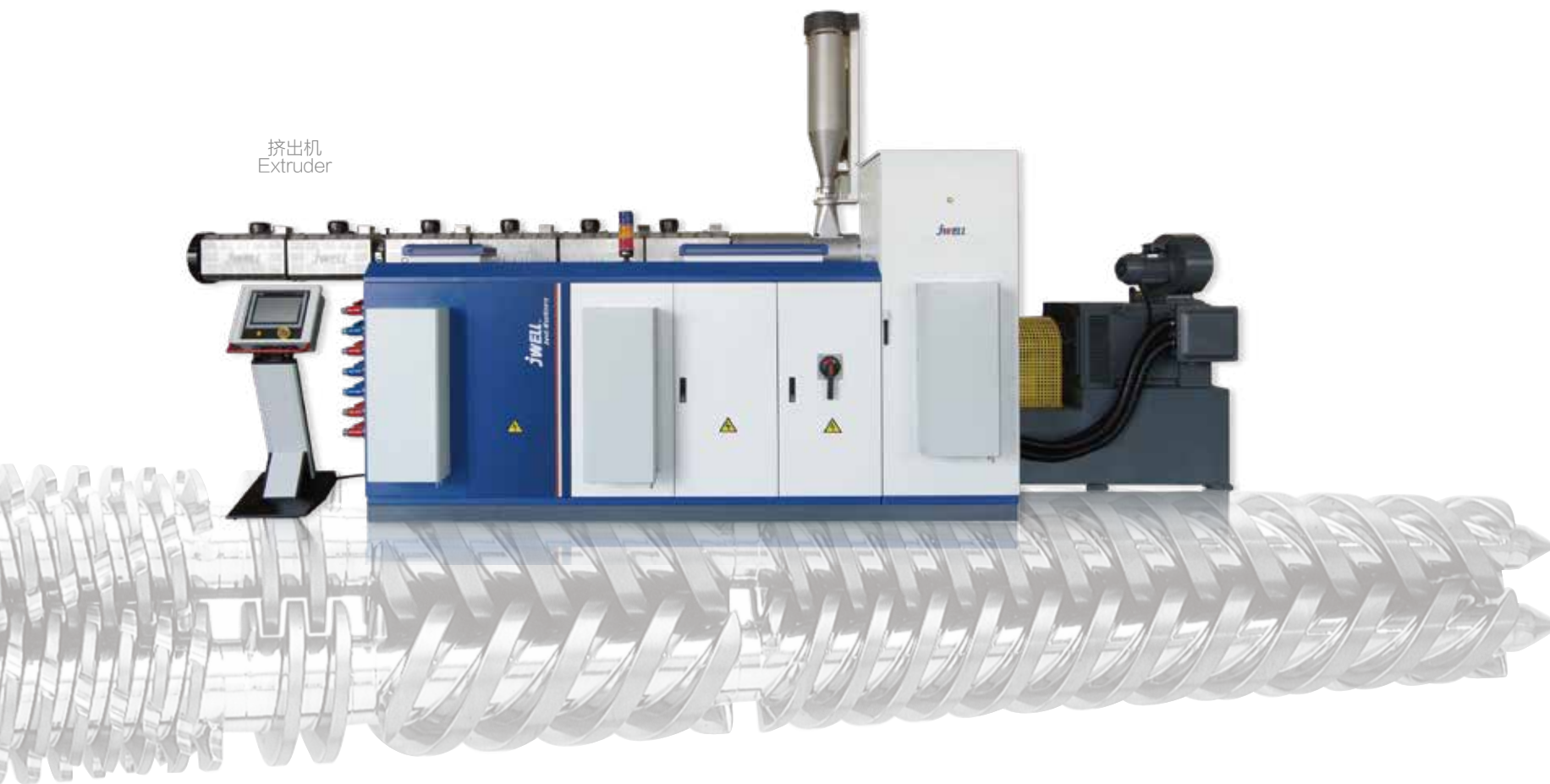
Rubber roller surface include EDPM (Ethylene-Propylene-Diene Monomer), Hypalon, NBR, LSR (Liquid silicone rubber), Solid Silicone, Polyurethane, etc. According to the working conditions, there is the need to be oil resistant and solvent resistant. The elasticity, flexibility, impact resistance, wear resistance and other physical properties of the lining can affect the quality of the rubber roller and service life.

High temperature makes rubber aging easily, so except for choosing the high quality rubber for roller surface, the design of roller core for cooling is also very important. The spiral runner design for large flow capacity is adopted making roller surface temperature more uniform and under control.



# Linkage of Relating Auxiliary Equipment

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T型模头系列  
T-Die Series



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塑料管材挤出机头  
Pipe Extrusion Mould



辊筒用旋转接头  
Adapter for Rollers



破碎机  
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电热片、电热管  
Heating Rings, Heating Rods

# Production Base

生产基地

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品牌之路 — 在奋斗中前行  
Road of the brand — Walking through struggle



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Our customers are all over China, and we have customers in Russia, India, Korea, Indonesia, Middle East, South America, Spain, Italy and other countries and areas. Our machines are well accepted by our customers.