

GRM

Goodroller Machinery 江苏优轧机械

金属成型解决方案专家

Metal forming solutions expert



江苏优轧机械有限公司

Jiangsu Goodroller Machinery Co., Ltd.

苏州优轧智能科技有限公司

Suzhou Goodroller Machinery Co., Ltd.

优轧机械 Goodroller Machinery

金属成型解决方案专家

GRM 坐落于风景优美、交通便利的苏州张家港市，是国内具有独立研发和加工制造能力的精密轧机制造商，也是国内较早将多设备联用自动控制系统应用于光伏焊带生产成套装备的行业开创者之一。公司研发团队拥有 20 余年金属线材加工设备研制经验，致力于为客户提供专业的金属成型解决方案。

GRM 主要生产线材精密轧机系列和光伏焊带成套设备，产品涵盖万能轧机、圆轧圆轧机、合金扁线精密轧机、异型线材精密轧机，以及光伏焊带压延涂锡一体机、汇流带压延涂锡一体机等专用设备。这些设备以其高精度、高稳定性和高度的行业适配性，

广泛应用于电子、医疗、光伏、汽车、矿产及日常用品等多个领域。

公司注重科技创新，通过建立自主研发团队并与多所高校开展产学研合作，已获得国家发明专利及实用新型专利 20 余项。GRM 以“立足国内市场，逐步开发国际市场”为战略导向，致力于为全球金属线材产业发展创造新的市场价值

About us



GRM: Professional Solutions for Metal Shaping

GRM is located in Zhangjiagang, Suzhou—a nationally recognized civilized and hygienic city. Benefiting from a strategic location with excellent transportation links, the company is approximately 10 minutes from the Zhangjiagang Station on the Hutong and Yangtze River Delta High-Speed Rail lines, and about one hour from Shanghai's major transport hubs.

As a precision rolling mill manufacturer in China with independent R&D and manufacturing capabilities, GRM stands as one of the pioneers in developing and applying multi-equipment integrated automatic



Goodroller Machinery Metal forming solutions expert



control systems for complete photovoltaic ribbon production equipment. Our R&D team possesses over 20 years of experience in designing metal wire processing machinery, enabling us to deliver comprehensive metal forming solutions tailored to specific customer requirements.

Committed to technological innovation, GRM continuously increases investment in R&D. We have established a dedicated in-house innovation team while maintaining long-term collaborations with several universities. Our research in wire rolling and drawing equipment has resulted in more than 20 national invention patents and utility model patents.

Core Product Lines

GRM specializes in two primary product series:

Precision Wire Rolling Mills: Including universal rolling mills, round-to-round rolling mills, precision rolling mills for alloy flat wires, and special-shaped wire rolling mills.

Complete Photovoltaic Ribbon Production Equipment: Such as PV ribbon rolling-tinning integrated machines, busbar rolling-tinning integrated machines, annealing equipment, tinning machines, and precision winding and rewinding machines.

Applications

Our equipment produces components widely used across various industries, including electronics, medical, photovoltaic, automotive, mining, and daily consumer goods.

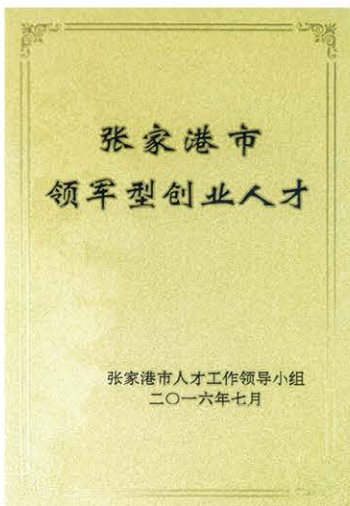
With a strategy focused on "Establishing a strong presence in the domestic market while progressively expanding into international markets," GRM is dedicated to creating new value for the global metal wire industry through sustained innovation and high-quality service.

荣誉资质 ■ Honorary Qualifications



质量是 GRM 与您信任的起点。我们秉持诚信，坚持创新，将卓越品质融入每个环节，成为您可靠的合作伙伴。

Quality builds trust. Integrity keeps our promise. Innovation shapes the future. Excellence runs through all we do. GRM, your trusted partner in Precision Rolling Technology.





Goodroller Machinery

- 一种箱式线材循环清洗机
- 一种汇流带延压生产线
- 一种不间断自动换盘机构
- 一种金属箔轧制装置
- 一种汇流带压延设备
- 一种异形线材自动收线装置
- 一种光伏焊带用铜带在线退火装置
- 一种高速涂锡机用冷却装置
- 一种自适应大型卷料装置
- 一种铜箔定型生产设备
- 一种多工位刻扁线生产收线设备
- 一种高速涂锡机用稳流风刀
- 一种光伏电池板铜带镀锡装置
- 一种异形线材轧机机构





生产设备 ■ production equipment

- 集研发生产质检于一体，实现全流程闭环管理，精准可控
- 积淀廿三载匠心技艺，融合现代智能制造方法，根基深厚
- 专注结构优化与严谨工艺，确保产品长效稳定，值得托付





- Integrated with R&D, production, and quality inspection, we achieve precise and controllable closed-loop management across the entire process.
- With 23 years of craftsmanship and the integration of modern intelligent manufacturing methods, we have established a solid foundation.
- Focusing on structural optimization and rigorous processes, we ensure long-lasting reliability and stability in every product, making us your trusted partner.



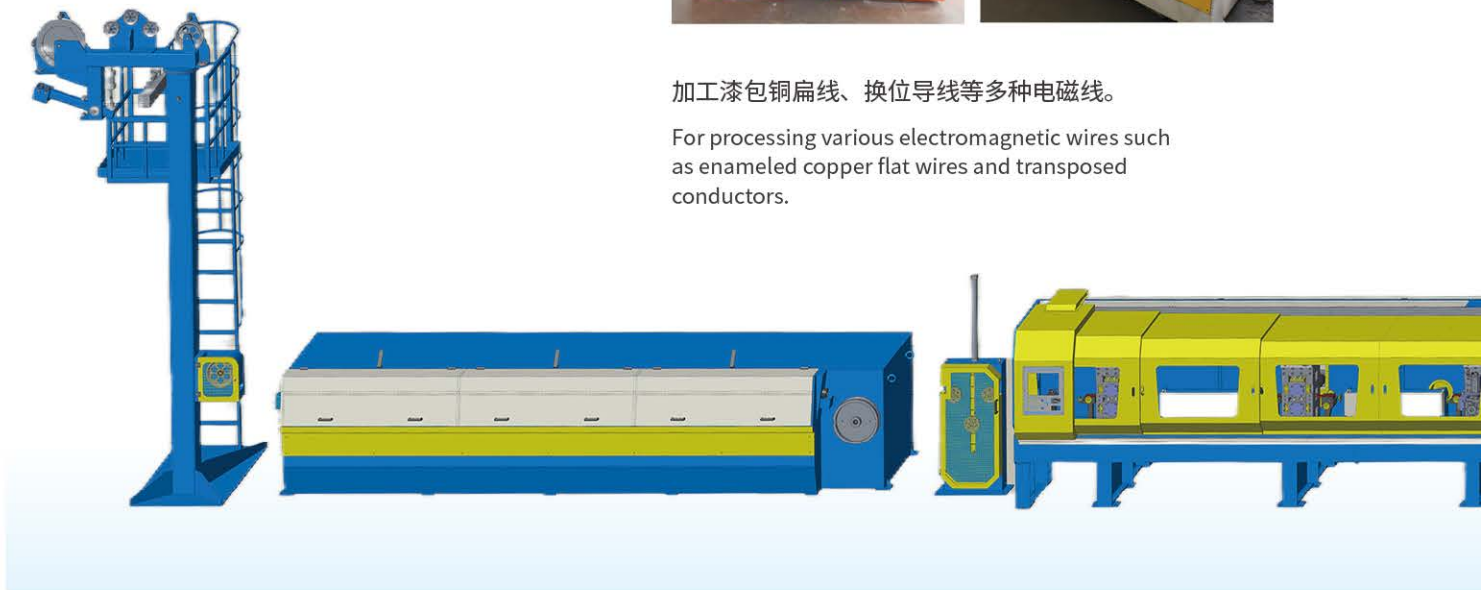
铜扁线拉轧一体机

Copper flat wire drawing and rolling integrated machine



加工漆包铜扁线、换位导线等多种电磁线。

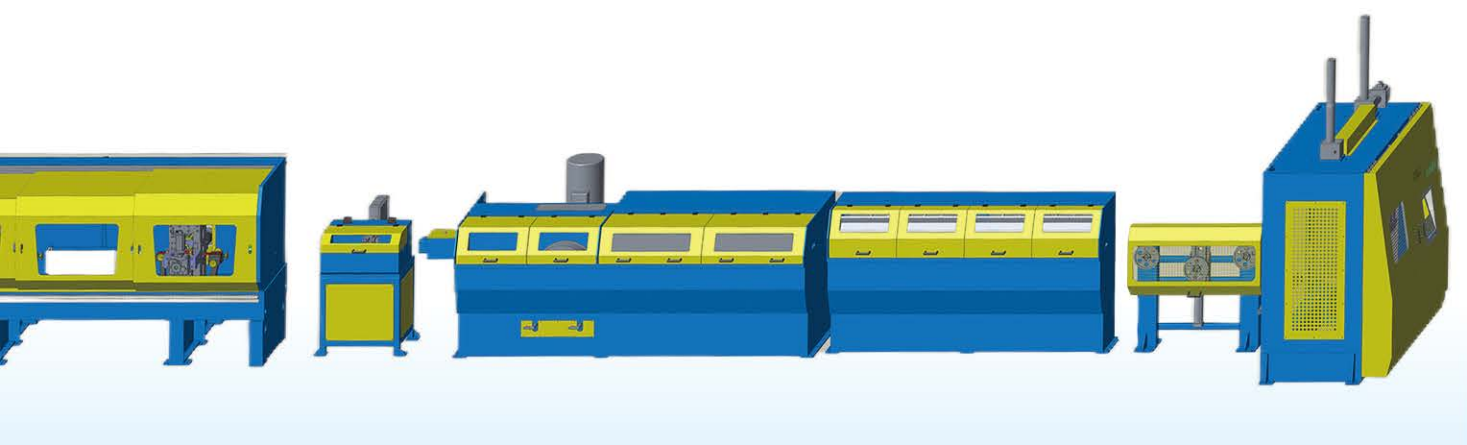
For processing various electromagnetic wires such as enameled copper flat wires and transposed conductors.



钛合金、高速钢、合金铜线材热轧成型机组

Hot rolling forming unit for titanium alloy, high speed steel and copper alloy wire





适用于钛合金、高速钢、合金铜等特种合金线材在线加热连续轧制成型

Suitable for the continuous rolling and forming of wire materials made of special alloys such as titanium alloy, high-speed steel, and alloy copper through online heating



精密六联轧机 ■

Precision 6-high mill

轧制多种不锈钢、碳钢材料。用于波形簧、卷簧、钢箔制造。

For rolling various stainless steel and carbon steel materials. Used in the manufacture of wave springs, coil springs, and steel reeds.

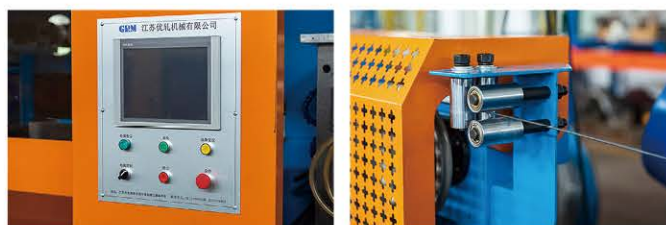


精密七联轧生产线 ■

Precision 7-stand tandem rolling line

轧制多种不锈钢、碳钢材料扁带

For rolling various stainless and carbon steel flat strips



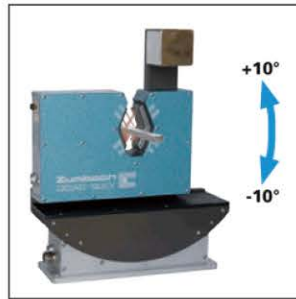
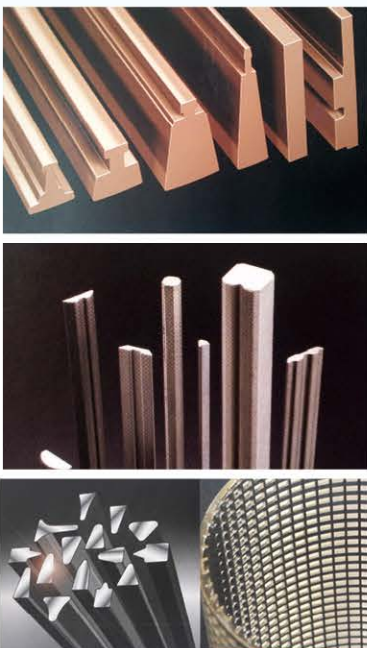


万能轧机、异形金属线材精密轧机 ■

Universal rolling machine、Shaped metal wire precision rolling machine

用于轧制多种铜、铝、不锈钢、碳钢、锋钢、合金材料等扁平或者异型线材。轧制的产品适用于电磁线、石油化工、矿业、造纸、筛选、刃量具、汽车、摩托车、航空、军工等多个行业。

The machine is suitable for rolling all kinds of flat or shaped wire, copper、aluminum、stainless steel、carbon steel、high speed steel、alloy wire. The finished product is suitable for electromagnetic wire, petrochemical industry, mining industry, paper making, screen, DFL, car, motorcycle, aviation, war industry and so on.



全形状监测仪



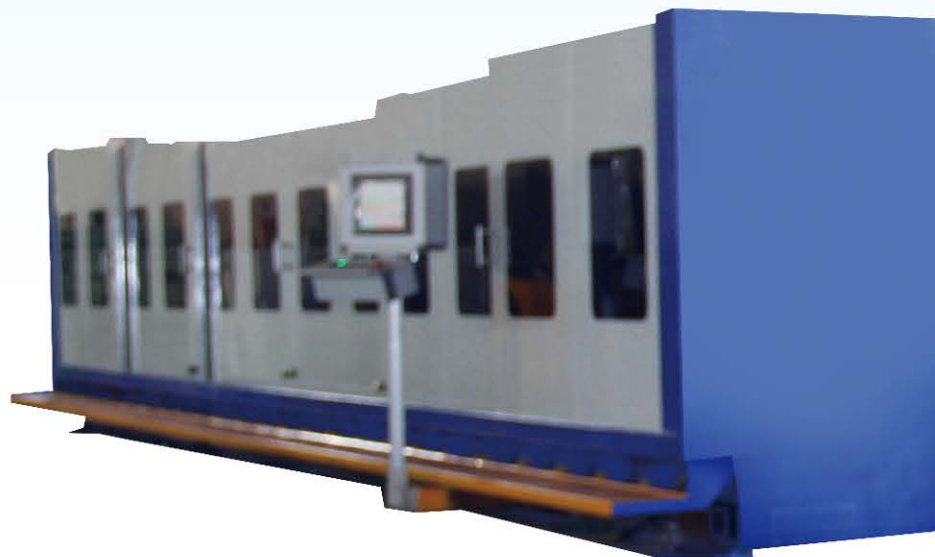
接触式测厚仪



◆ PLC+ 人机界面控制系统
PLC+Human-machine
interface control

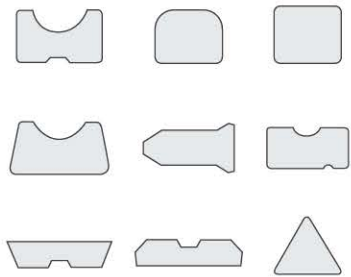


◆ 进口检测仪实现全闭环控制
Import detector
achieve full closed loop control



异形截面图

Shaped cross-section view



生产线组成

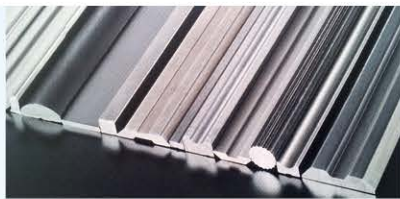
全自动放线系统
两辊平轧系统
四辊成型系统
四辊精轧系统
张力控制系统
冷却及润滑系统
自动控制测量仪
精密收排线系统

Production line component

Full-automatic pay-off system
Two rollers horizontal rolling system
Four rollers roll forming machine
Four rollers precision rolling system
Tension control system
Cooling and lubrication system
Automatic control measuring instrument
Precision take-up and winding system

触摸屏电脑操作控制系统

显示生产数据及设备维护数据
操作员设定生产作业及相关数据报告
人机界面监控生产过程
产品精度公差 $\pm 0.003\sim 0.03\text{mm}$



Touch screen computer operation control system

To show production data and maintenance of equipment data
Operators set production operation and relevant data report
Human-computer interface monitor productive process
Product tolerance: $\pm 0.003\sim 0.03\text{mm}$

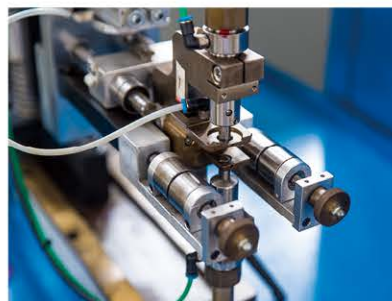


GRM-180-3 精密轧机

GRM-180-3 precision rolling machine

本机器适用于将高速钢、碳钢、不锈钢线圆线轧制成扁线、扁方线、矩形线材。采用进口接触式测厚检测控制系统，可实时跟踪并调节产品质宽、厚尺寸，整机全闭环控制。收线采用精密收排线系统。整机采用西门子/德国倍福控制器、触摸屏、伺服等控制。

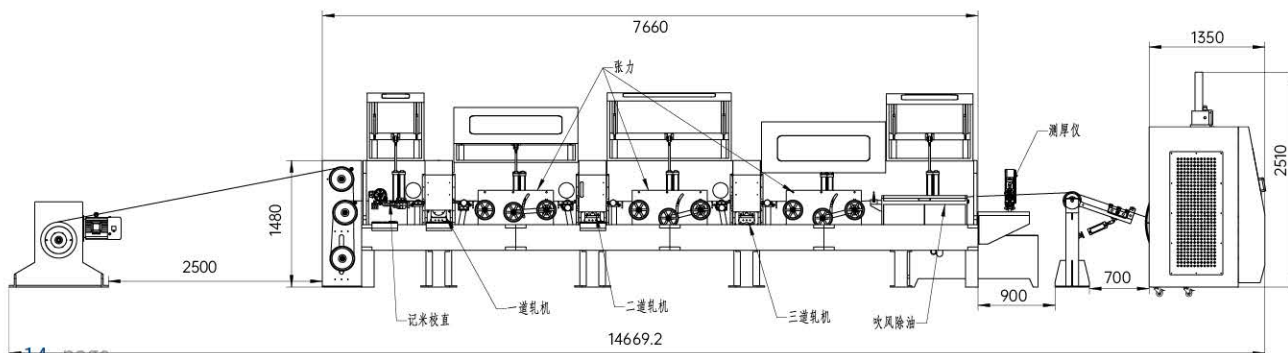
This machine is suitable for rolling high speed steel, carbon steel and stainless steel wire into flat wire, flat square wire and rectangular wire. The imported contact thickness measurement and control system can track and adjust the product quality, width and thickness in real time, and the whole machine is fully closed-loop controlled. Take-up adopts precise take-up and arrangement system. The whole machine adopts Siemens / Germany Beckhoff controller, touch screen, servo control, etc.



机械概况 Production line component

- 1、用途：扁方线材加工（宽厚比小于4倍）
- 2、入线范围：φ 1.0-φ 5.5mm
- 3、成品尺寸：宽度 2.0-5.5mm；厚度 0.6-3.5mm
- 4、设计速度 350m/min
- 5、精度：厚度 ±0.005mm 宽度 ±0.015mm
- 6、R角要求：R0.08-0.3mm，（可根据产品大小及需求进行工艺调整）；直线度 ≤ 3mm/m

Active pay-off → feeding tension system → No.1 flat rolling mill → tension control → No.2 Turk head rolling mill → tension control → No.3 Turk head rolling mill → tension control → width measurement → contact-type thickness measurement -precision take-up



合金扁线压延机

Alloy flat wire rolling machine

特种合金线材、异形线材行业

Special alloy wire、Shaped wire industry

适用于多种规格铜、镍、钛、钨、铝、锌等各种合金扁线或者方型线材精密压延成型。

The machine is suitable for rolling alloy flat wire, all types of copper, nickel, titanium, tungsten, molybdenum, Zinc and so on. Or precision roll forming square wire.



触摸屏电脑操作控制系统

Touch screen computer operation control system



铜扁线

显示生产数据及设备维护数据
操作员设定生产作业及相关数据报告
人机界面监控生产过程

To show production data and maintenance of equipment data
Operators set production operation and relevant data report
Human-computer interface monitor productive process



镀金方线



产品厚度：0.05~6mm
公差：±0.005~0.015mm
产品宽度：0.1~18mm
公差：±0.03~0.05mm

Product thickness: 0.05~6mm
Tolerance: ±0.005~0.015mm
Product width: 0.1~18mm
Tolerance: ±0.03~0.05mm

扁平线材精密压延机 ■ Flat wire precision rolling machine

铜、铝漆包扁线和绕包扁线及电工扁线行业, 不锈钢线材行业
Copper, enamelled rectangular aluminum wire and covered rectangular wire, Stainless steel industries



触摸屏电脑操作控制系统 Touch screen computer operation control system

显示生产数据及设备维护数据
操作员设定生产作业及相关数据报告
人机界面监控生产过程

To show production data and maintenance of equipment data
Operators set production operation and relevant data report
Human-computer interface monitor productive process

产品厚度公差 $\pm 0.005\sim 0.015\text{mm}$
宽度公差 $\pm 0.03\sim 0.05\text{mm}$
Tolerance: $\pm 0.005\sim 0.015\text{mm}$
Tolerance: $\pm 0.03\sim 0.05\text{mm}$



扁线精密收排线
Flat wire precision winding



铜扁线
Copper flat wire



扁方线材图样
Flat and square wire sample photo



矩形线材横截面 $R \leq 0.1\text{mm}$
Rectangular wire cross-section $R \leq 0.1\text{mm}$



铝、铝合金扁线
Aluminum, Aluminum alloy flat wire



对辊压延
Double rolling

分条机 / 精密收排线机 ■

Slitting machine/precision winding machine

分条机规格多种可选，可加工材料：铜带、钢带、3M 薄膜等产品，精密（复绕）排线机全伺服独立排线控制，生产头数可根据客户要求定制。



Great variety of slitting machine, Material:copper strip, steel strip, 3M thin film etc. Precision (rewinding) winding machine is controlled by servo, the lines of production can be customizable.



可逆轧机 ■

Reversible rolling mill



全新一代光伏焊带一体机

New generation Solar PV ribbon equipment

- A、偏低屈服：成品焊带 47~52MPa
- B、精密收卷：双伺服收卷系统、不停机双工位设计
- C、专用风道：专利技术冷却风道
- D、运行速度：350~500m/min

- A. lowest yield strength :47~52MPa
- B. Precision winding: Double servo winding system, non-stop double spools design.
- C. Air flue: Original patent technology of cooling air flue.
- D. High output: 350~500m/min



精密复绕机
Precision rewinding machine

无主栅光伏焊丝一体机

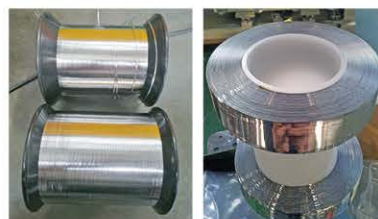
Multi-tabbing PV wire machine

生产流程

圆丝放线→整形控制→连续在线退火→清洗助焊→快速涂锡→储线张力控制→双工位精密排线收卷

指标：屈服强度： $\phi 0.21\text{mm} \leq 60\text{MPa}$ ，（检测仪器允许误差 2 个点）
运行速度：正常运行速度： $\geq 350\text{m/min}$ ($\phi 0.21\text{mm}$)
设备最大机械速度：500m/min。

Yield strength: $\phi 0.21\text{mm} \leq 60\text{MPa}$, (Laser mic with 2% tolerance)
Speed: Normal running speed: $\geq 350\text{m/min}$ ($\phi 0.21\text{mm}$)
Max. Speed: 500m/min



精密的排线效果
Precision Winding Product



汇流带高速一体机

Busbar high speed equipment

铜丝放线→精密拉丝→四道压延→在线退火→清洗活化
→高速涂锡→储线控制→精密双工位收卷
也可分开购买铜基材压延机、汇流带高速涂锡机

速度 speed: 90~120m/min

规格 specifications: 4~8mm

Copper wire pay-off → Precision drawing → Four stands rolling → Online annealing → Cleaning → High speed tin coating → Wire storage → precision double spools winding

Also can individually purchase copper raw material rolling machine or busbar high speed tin coating machine.



■ 焊带、汇流带
Interconnect
Busbar



■ 焊带裁切机
Interconnect cutting
machine



■ 铜带分条机
Copper sheet slitting
machine



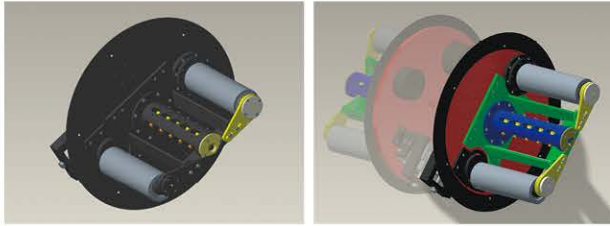
■ 低速涂锡机
Low speed tin coating
machine



砂带除锈机 ■

Belt derusting machine

环保无酸洗砂带除锈机也叫金属线材抛光机、盘条抛光机、线材抛光机。用于配合剥壳机联动生产，去除线材表面氧化层，适用于焊丝，线材，光亮丝，光亮杆，钢丝绳等行业使用。



Our Eco-friendly Non-pickling Descaling Machine (also called a Wire Polishing Machine) efficiently removes oxide layers from wire surfaces when used after a peeling machine. It is ideal for processing welding wire, wire rods, bright wire, bars, and wire ropes.



选配置置：连续退火软化装置；双工位全自动换盘系统。

Optional device: continuous annealing and softening device; Double spools full-automatic exchange system



管式退火炉
Tube annealing machine



轴装收线机
Shaft mounted take-up machine



(分电机) 拉丝机
(Single motor) drawing machine

拉丝机 ■ Wire drawing machine



■ 铜线中拉机
Copper wire intermediate drawing machine



■ 中细线拉丝机
Intermediate Fine wire drawing machine

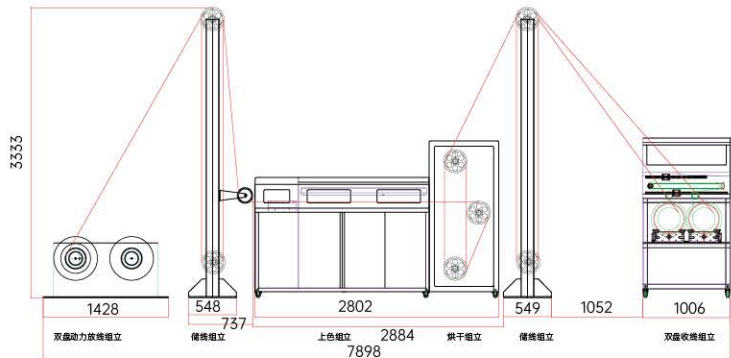
黑色焊带生产线 ■

Black PV ribbon production line



黑色焊带生产线用于焊带表面涂装，变成黑色，减少焊带在主件上的反射，同时具备美观效果。

The black PV ribbon production line is used for coating the surface of the PV ribbon into black, reducing the reflection of the PV ribbon on the module, and having the beautiful effect at the same time

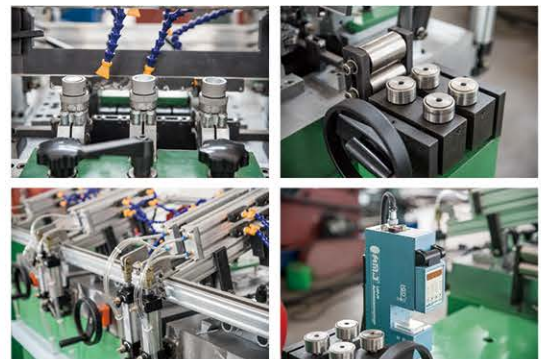


精密修边机 ■

Precision trimming machine

用于不锈钢带分条后边部精密修整、倒角、去除毛刺，确保宽度公差尺寸及边部光滑。

It is used for precise trimming, chamfering and deburring of stainless steel strip after slitting to ensure the width tolerance dimension and smooth edge

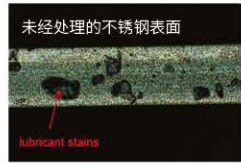


等离子体退火技术 + 装备

Plasma annealing technology+equipment



■ 应用于镀层工艺热处理及表面处理



等离子体清洁前后铜管的表面对比



■ 应用于连续热处理

等离子体设备组成部分

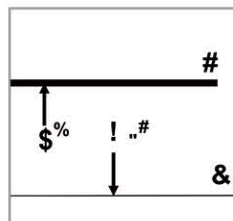
- F 真空系统, 材料引导 & 气体供应系统
- F 等离子体工作模块: 清洗 & 加热
- F 温度区间: 使材料保持在一定温度下
- F 冷却系统: 气冷或者气 - 水混合冷却
- F HMI 界面的 PLC 控制系统
- F 设备支撑结构体
- F 选项 1: 传送系统
- F 选项 2: 放线和收线装置



■ 等离子退火线 适用于不锈钢管、铜管及异形材

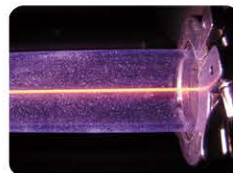
等离子体处理简介

等离子体 = 离子化气体, 含离子、电子和自由基。
 等离子体处理 = 线材表面离子轰击, 直接 / 集中对线材表面进行加热。
 热处理, 比如退火, 应力消除等。
 等离子体退火设备 = “管、线材高速退火设备”



表面处理

- 除油脱脂
- 去除表面氧化物
- 控制表面氧化程度 (着色)
- 表面氮化处理



高精度压延机

High precision rolling machine

电热合金扁线行业

Electrothermal alloy flat wire industry



移动式精密轧制，有效提升轧辊使用寿命 3 倍以上。
适用于多种规格铜、镍、铬、铁、铝等各种电热合金扁线精密压延成型。

National initiative movable type precision rolling machine, effectively improve the service life of rollers more than 3 times.

The machine is suitable for precision roll forming Electrothermal alloy flat wire, all types of copper, nickel, chromium, iron, aluminum and so on.

触摸屏电脑操作控制系统

Touch screen computer operation control system

产品厚度 :0.02~1mm
公差 :±0.005~0.015mm
产品宽度 :0.25~5mm
公差 :±0.03~0.05mm

Product thickness:0.02~1mm
Tolerance:±0.005~0.015mm
Product width:0.25~5mm
Tolerance:±0.03~0.05mm



FFC 压延机
FFC rolling machine



选配装置 Optional device

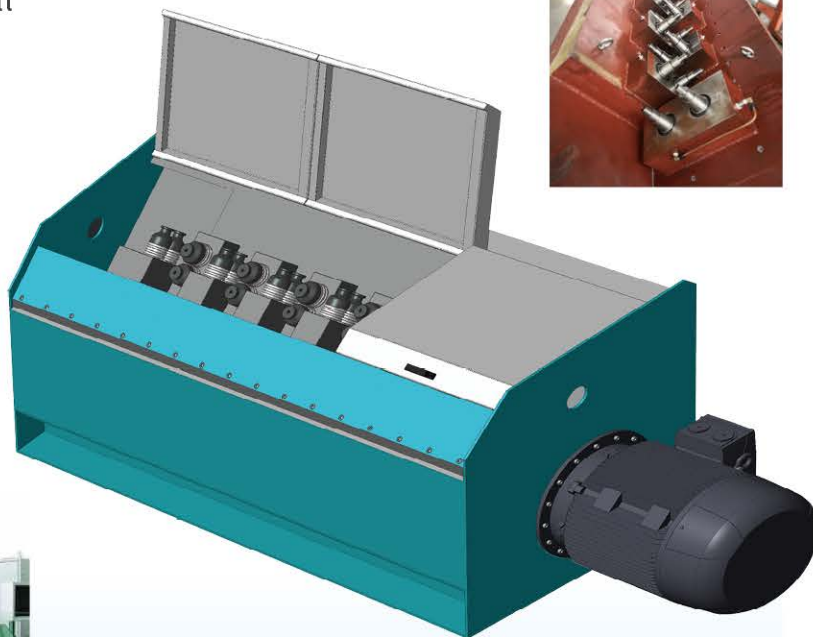
连续在线退火装置；双工位全自动换盘系统
Continuous online annealing device, Double spools full-automatic exchange system

悬臂式圆轧圆精轧机 ■

Cantilever type Wire reduction mill

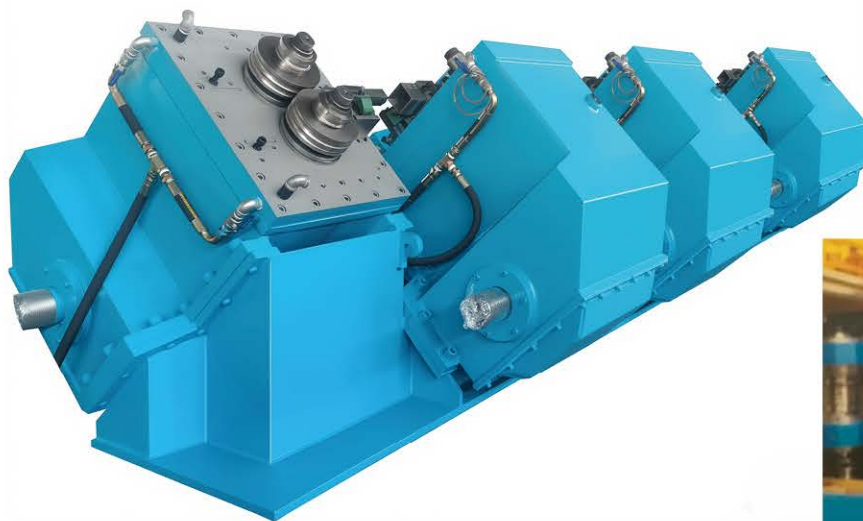
先进的悬臂式结构，整机传动采用研磨齿轮，轧头采用 45° 顶交 90°，方便快速换辊及维护，适合直径 $\phi 30\text{mm}$ 以下钛合金、贵金属、合金黄铜等不易拉拔的圆线材管材变径。

设计速度：30 ~ 200m/min。



Featuring an advanced cantilever structure and gear drive, this machine has a 45° rolling head for quick roller changes. It efficiently processes hard-to-deform materials (like titanium or brass) in round wire or tube form up to $\phi 30\text{mm}$.

Machine speed: 30-200m/min



其他线材设备 ■

Other wire equipment



- 特种线材生产线
Special wire production line



- 复合金属线材生产线
Metallic composite wire production line



用于超导合金产业的定制设备，将不同材质的带材通过特殊工艺有效的结合在一起，常规的就是两层铜带当中夹一层超导材料。

This custom equipment is designed for the superconducting alloy industry to laminate distinct material strips using a proprietary technique. A common application is the stacking of a superconducting core between two outer copper strips.

四方线拉丝机 ■

Square wire drawing machine

四方线插针行业的配套设备，用于将圆线通过3~4只模具拉拔成四方线、规格范围边长0.3~1.2mm。

Application: An associated machine for the square pin industry.

Function: Transforms round wire into square wire using 3-4 drawing dies.

Output: Produces square wire with a side length ranging from 0.3 mm to 1.2 mm.



- 精密矫直裁断机
Straightening and cutting machine

- (抛光) 精密排线机
(Polishing) precision winding machine

单道轧机 ■

Single stand horizontal rolling machine



桶装收线机 ■

Barrel take-up machine



铜带复绕机 ■

Copper tape rewinding machine



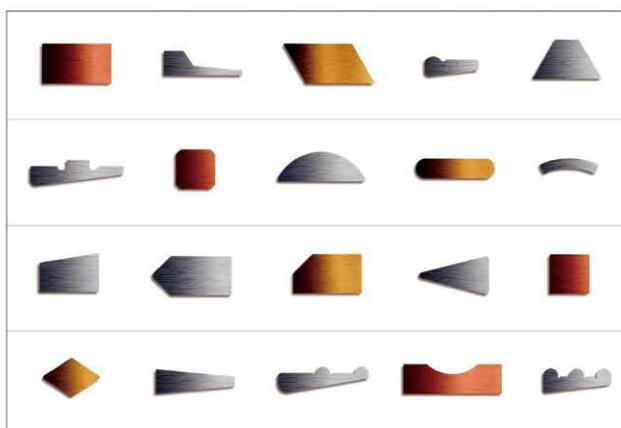
精密四联轧机

Precision 4-high mill



轧制多种碳钢、不锈钢材料卡圈、
卡环、四方线、梯形线、异形线。

For rolling various carbon and stainless steel
profiles, including retaining rings, snap rings,
square wires, trapezoidal wires, and special-
shaped wires.





微细合金扁线精轧机 ■

Finishing mill for micro-fine flat wires

轧制微细不锈钢、钛合金、贵金属扁线。

For rolling micro-fine flat wires of stainless steel, titanium alloy, and precious metal



在线拉拔清洗机

Online drawing and cleaning machine

用于多种线材在线拉拔、清洗、精密收排线一体机组
Used for various wire drawing, cleaning, precision winding and uncoiling integrated unit



多头涂锡生产线

Multi head tin coating production line

同于铜包钢、铜包铝、铜线等在线热涂锡。
It is used for copper-clad steel, copper-clad aluminum, copper wire and other on-line Hot Tin Coating



微细扁线精密压延退火一体机

Integrated precision rolling and annealing machine for micro-fine flat wires

贵金属、合金铜等微细扁线精密加工

For precision processing of precious metals, copper alloys and other micro-flat wires



精密复合轧制生产线

Precision composite rolling production line

用于超导、合金、不同带材复合轧制成型

Used for superconducting, alloy, and various strip composite rolling forming



全自动精密收卷机 ■

Fully automatic precision coiling machine

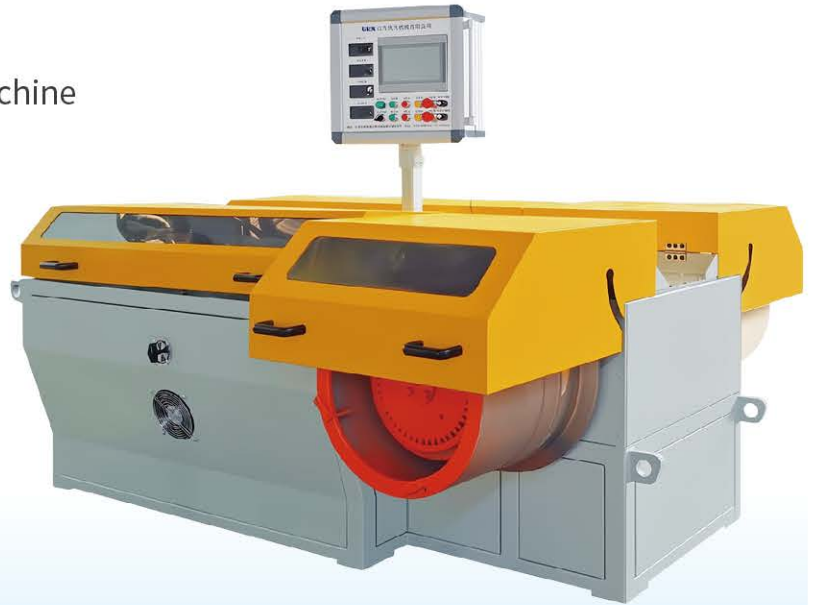
多种金属丝材、带材的自动换卷、精密排线。

Features automatic reel change and precision traversing for various metal wires and strips



在线加热拉丝机 ■

Online heating wire drawing machine



用于特种合金材料的丝材在线加热拉拔
Used for online heating and drawing of wire materials for special alloy materials

钢丝拉丝机 ■

Steel wire drawing machine



两辊热轧机

Two-roll hot rolling mill

在线热轧特种合金、复合金属材料：
铝合金、钛合金、铝硅合金等。

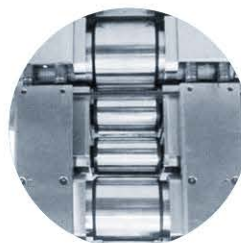
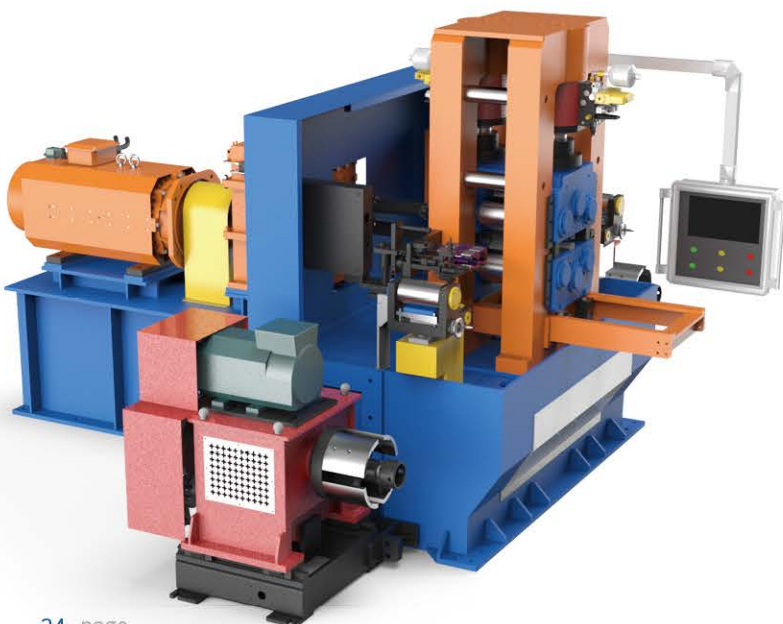


For in-line hot rolled special alloys and composite metal materials, such as aluminum alloy, titanium alloy, aluminum-silicon alloy, etc.

精密多辊轧机

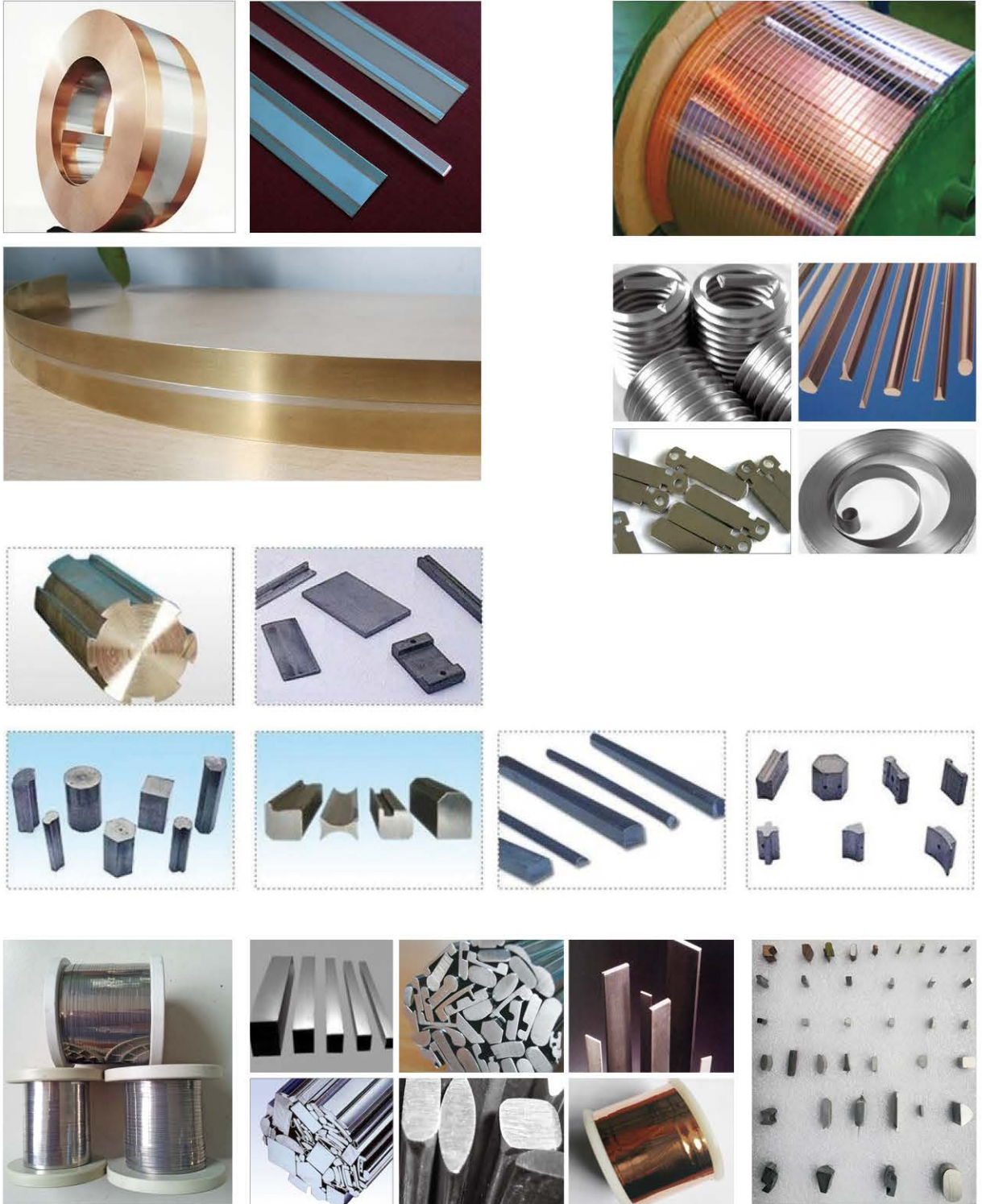
Precision multi-roll mill

轧制合金材料薄带材：最薄 0.008mm
For rolling thin strips of alloy materials, with a minimum thickness of 0.008mm.r



客户产品展示

Customer Application Gallery





江苏优轧机械有限公司
Jiangsu Goodroller Machinery Co., Ltd.

苏州优轧智能科技有限公司
Suzhou Goodroller Machinery Co., Ltd.

地址：江苏省苏州张家港市杨锦公路 425 号
Add: No. 425, Yangjin Highway, Zhangjiagang City, Jiangsu Province, China
手机 (M.B) : 86-13372103898/13962464998
传真 (Fax) : 0512 -58907835
邮箱 (E-mail) : sales@grmrollingmill.cn

www.grmrollingmill.com/ www.youzha.net.cn/

