迈迪逊 MaideSon®

全伺服欧标钢轨钢梁履带封边机

FULL-SERVOEU STANDARD HEAVY-DUTY STEEL BEAM
& STEELRAIL TRACK EDGE BANDING MACHINE

Model: M-310



---迈迪逊封边机，返工少一半

Maideson Edge Bander, Half Less Rework

广东源木机械制造有限公司

Guangdong Yuanmu Machinery Manufacturing Co., Ltd

设备名称：全伺服重型钢轨钢梁履带封边机 **设备型号：M-370**

Equipment name:Full-servo Heavy-duty Steel Beam & Rail Track Edge Bander **Equipment model: M-370**

设备品牌：广东源木机械制造有限公司 **设备产地：中国、广东、佛山**

Equipment brand: Maideson **Equipment origin: China, Guangdong, Foshan**

一、设备主要技术参数(PARAMETER)

型号Model	M-370		
设备尺寸 DIMENSION	9000*950*1750mm	设备总功率 TOTAL POWER	32KW
设备气压 AIR PRESSURE	0.6PA 12mm*2	封边带厚度 THICKNESS OF EDGE	0.4-3mm
板材厚度 THICKNESS OF BOARD	8-60mm	板材宽度 WIDTH OF BOARD	≥40mm
板材长度 LENTH OF BOARD	≥150mm	进给速度 FEED SPEED	18/22/26/30 米/min
设备净重 WEIGHT	5500KG	吸尘口 DUST SUCTION HOLE	100mm*5 个
电压 VOLTAGE	380V 50HZ 3PH	语言 LANGUAGE	Chinese&English

二、设备功能（FUNCTIONS）

伺服靠尺、分离装置、双刀预铣（标配乐客H63预铣刀）、PUR 双色混胶涂胶（16种方案）（可选配激光）、双通道伺服送带、伺服5 轮压贴(免气压款)、豪迈款粗修边、豪迈款伺服精修边、豪迈款伺服刮边、三轴气动平刮、磁悬浮伺服水平齐头齐尾、磁悬浮伺服单电机跟踪、清洗装置、立式抛光1、立式抛光2、伺服升降、伺服输送

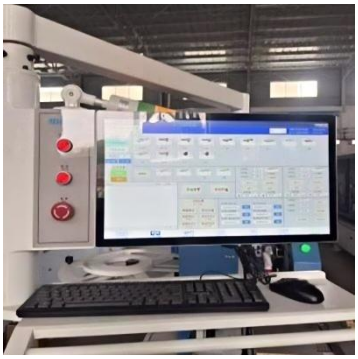
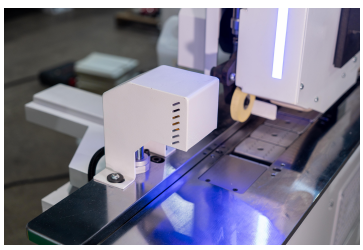
Servo-driven Infeed Side Guide→ Separation Device→ Double-blade Pre-milling (Standard: Leuco H63 Pre-Milling blades)→ Dual-Color PUR Gluing (16 Working Modes)(Optional Laser Edge Banding)→ Servo band feeding with double channel→ Servo 5-Wheel Pressing(no air pressure version)→ HOMAG-Style Rough trimming→ HOMAG-Style Fine trimming→ HOMAG-Style Scraping (Servo Optional)→ 3-Axis Pneumatic Flat Scraping→ Magnetic-Levitation Servo Horizontal End Cutting→ Magnetic-levitation Servo-driven single-motor Corner Rounding→ Cleaning Device→ Vertical Buffing1→ Vertical Buffing2→Servo-driven Lifting→Servo-driven Conveying

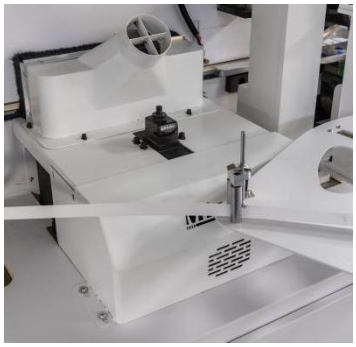
三：设备图片(EQUIPMENT SHOT)

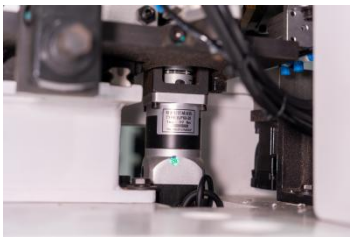
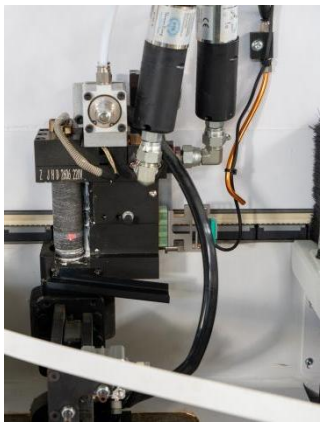

M-370

四：功能单元介绍(INTRODUCTION OF FUNCTIONS)

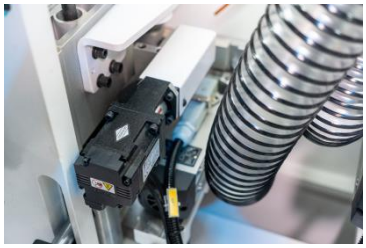
功能单元 FUNCTION	图片 PICTURE	备注	NOTED
钢轨机架单元 STEEL-RAIL FRAME UNIT		厚钢板一体焊接，经过退火消除内应力，整机不容易扭曲、塌腰。连续高负荷生产，机架不会发生永久形变，整机基准不易改变	Constructed with thick steel plates via integral welding process. Annealing treatment is applied to eliminate internal residual stress of the frame. This greatly reduces risks of frame twisting and mid-span sagging. During continuous high-load production, the machine frame will not produce permanent deformation, and the overall benchmark of the equipment remains unchanged.
钢梁压料单元 STEEL-RAIL BEAM PRESSING		1.刚性大不易变形；2.压料均匀板材输送不跑偏；3.抗震动，高速生产稳定；4.薄板窄板加工效果好；5.使用寿命长，精度持久；6.重载能力强；7.安装基准稳定	1. High structural rigidity prevents deformation. 2. Uniform pressing force ensures panels run without offset during conveyance. 3. Outstanding vibration-resistance guarantees stable performance under high-speed production. 4. Superior machining results are achieved when processing thin-gauge and narrow-width panels. 5. Extended service life and long-term sustained-precision. 6. Robust heavy-duty load-bearing capability. 7. Permanent stability of the installation reference benchmark.

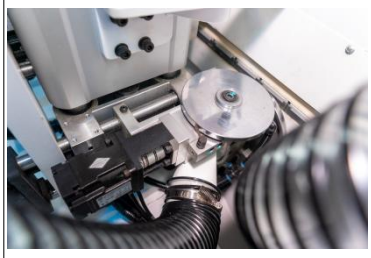
触摸屏 TOUCH SCREEN		21 英寸高清显示屏 采用汇川股份的操作系统，工业系统级，反应灵敏，无卡顿，操作屏旁边配置有三色状态指示灯，可以实时显示设备的状态，分别有故障/运行中/待机中	Touchscreen: 21-inch HD display Uses Inovance Co., Ltd.'s operating system, industrial system-level, responsive, no lag. A three-color status indicator light is configured next to the operation screen, which can display the device status in real time, including Fault/Operating/Standby.
伺服靠尺单元 SERVO-DRIVEN SIDE GUIDE UNIT		电机功率：0.4KW*1 台 靠尺单元每天都在受力，采用目前市场最先进的分体式伺服靠尺单元，将作用力传到至机身框架，避免长期使用靠尺变形或跑偏，单元采用双精密直线导轨+双精密直线轴承，确保调节预铣量时靠尺的稳定	Motor Power: 0.4kW × 1 unit The fence unit bears continuous load during daily operation. Adopting the industry's most advanced split-type servo fence unit, it transfers all stress to the machine frame, preventing deformation and offset of the fence after long-term operation. Equipped with **dual precision linear guides and dual precision linear bearings**, this unit maintains stable fence positioning when adjusting the pre-milling depth.
自动测板厚单元 AUTOMATIC PANEL-THICKNESS DETECTION UNIT		自动检测板材实际厚度，无需工人手动测量；厚度偏差超 0.2mm 自动预警，减少封边不良，适配 PET 高光等高要求板材加工。	Automatically detects the actual thickness of panels, no manual measurement required by operators. An early warning will be triggered when the thickness deviation exceeds 0.2 mm to reduce edge-banding defects. Suitable for processing high-demand panels such as PET high-gloss boards.

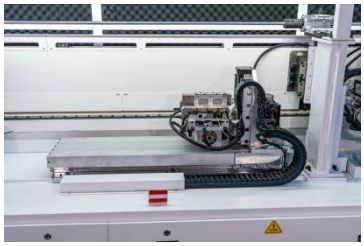
分离单元 SEPERATIO NUNIT		在板件进入设备，经过预铣单元， 可以选择开启分离装置，设备将自动根据板材位置喷出分离剂，避免后端工序胶水黏贴于板件表面	When the boards enter the equipment and pass through the pre-milling unit, the separation device can be optionally activated. The equipment will automatically spray a release agent according to the board position to prevent glue from adhering to the board surface in subsequent processes.
预铣单元 PRE- MILLING UINT		双电机预铣单元 电机功率：2.2KW*2 台 12000R/min 标配铣刀：125*30,H63高 德国进口乐客金刚石预铣刀铣去板材切割时的毛刺，使边带能更好的粘贴 重型基座、2-高速主轴、重型底座能够降低铣刀铣削时的振动，保证工件优质的铣削表面；预铣后配有除尘吹风。	Motor power: 2.2KW * 2 units, 12000 R/min Standard pre-milling cutter: Φ125×30, cutting height H43 (H63 height available as option) Adopt **German imported LEUCO diamond pre-milling cutter** to remove burrs generated during panel cutting, enabling better adhesion of edge banding tape. This unit features heavy-duty base frame and dual high-speed spindles. The robust base reduces vibration during milling, delivering premium smooth milling surface on workpieces. Air blowing dust removal system is equipped after pre-milling process.

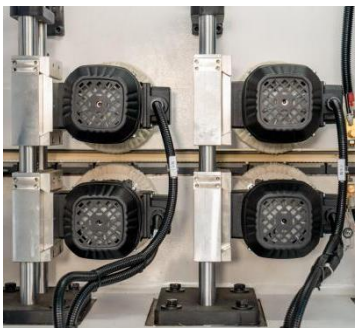
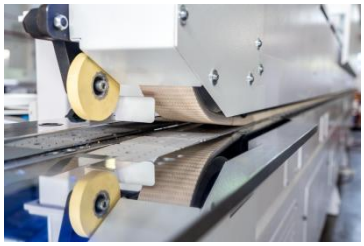
热风加热单元 HOT AIR HEATING UNIT		热风预热封边带，活化胶层，提升胶水附着力； 低温寒冷环境下保障热熔胶粘接效果，降低开胶风险； 适配高光板等敏感板材，封边效果稳定可靠。	Pre-heats edge-band with hot air to activate the adhesive layer and improve glue adhesion. Ensures reliable hot-melt bonding performance in cold environments and reduces the risk of glue opening. Suitable for sensitive panels such as high - gloss boards, delivering stable and consistent edge - banding results.
送带单元 PUR GLUING UNIT SERVO BAND FEEDING UNIT		双通道伺服送带 伺服送带精准断带，PVC边带激光ABS边带一键切换，双激光头检测封边带存储，水滴型定向送带盘杜绝卡带情况，搭配存带车实现高效率换带	Dual-channel servo-driven edge - band feeding system achieves highly accurate cutting of edge - band material. One-click switching is available for PVC and ABS edge bands. Dual - laser sensors monitor the remaining stock of edge-band. The drop-shaped directional feeding reel effectively eliminates band-jamming faults. Equipped with a band - storage trolley, the machine realizes highly-efficient edge-band replacement.
PUR 涂胶单元PUR GLUING UNIT		电机功率：0.75KW*1 台 伺服精准送带（电机功率：0.4KW*1 台）降低封边条的预留长度，带前是 ±3mm，带尾是 ±3mm 高精度胶轴，能够有效的降低胶线和节省热熔胶的使用量 光电检查报警系统：检查封边带是否正常通过，以防无带涂胶损坏工件	Motor Power: 0.75KW*1 unit Using PUR gluing, waterproof and moisture-proof, super strong adhesion, anti-oxidation sealing, isolates air to prevent glue deterioration, uniform and stable glue output, glue usage is 30% less than traditional EVA, fine glue lines, aesthetically pleasing without glue overflow

五轮压贴单元 SERVO 5-WHEEL PRESSING UNIT		大轮伺服压贴 电机功率：0.4KW*1 台 五轮偏摆式压贴，采用偏心轮+橡胶轮设计，最大程度的使边带紧紧压贴在板材边缘。 采用最新的免气缸结构，压贴单元不受设备气压影响，避免出现压贴力度跟随气压大小变化，影响封边效果	Large Roller Servo Pressing Unit Motor Power: 0.4kW × 1 unit Five-wheel swing-type pressing adopts eccentric cam and rubber roller design, which presses the edge band tightly against the panel edge to the maximum extent. It features the latest cylinder-free structure. The pressing unit will not be affected by the machine air pressure, eliminating fluctuating pressing force caused by unstable air pressure that impairs edge banding quality.

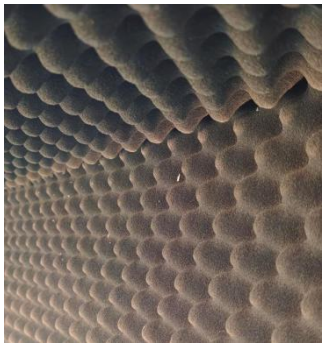
豪迈款粗修单元 HOMAG-STYLE ROUGH TRIMMING UNIT		电机功率：0.8KW*2 台 12000R/min 刀具规格：76*23* HSK25R*4Z* R1.5 重型基座，定向排屑，精准便捷，六刃平刀把板材上下多余的边带切除，为精修做准备。 采用最新结构加宽加重，更易调节	Motor Power: 0.8kW × 2 units, 12000 RPM Cutter Spec: 76×23, HSK25R, 4 flutes, R1.5. It is equipped with a heavy-duty base and directional chip removal system for precise and user-friendly operation. **The 6-flute flat cutter** trims excess edge banding on the top and bottom of panels to prepare for fine trimming. This unit features the latest widened and weight-reinforced structure for easier adjustment.
豪迈款伺服精修单元 HOMAG-STYLE FINE TRIMMING UNIT		电机功率：0.8KW*2 台 12000R/min 刀具规格：76*23* HSK25R*4Z* R1.5 重型基座，定向排屑，精准便捷，4刃平刀把板材上下多余的边带切除，为精刮边做准备。采用最新结构加宽加重，更易调节	Motor Power: 0.8kW × 2 units, 12000 RPM Cutter Specification: 76×23, HSK25R, 4 flutes, R1.5; Equipped with a heavy-duty base and directional chip removal system for precise and convenient operation. **The 4-flute flat cutter** cuts off excess edge banding on the top and bottom of panels to get ready for fine scraping. It adopts the latest widened and weight-reinforced structure for simpler adjustment.

豪迈款伺服刮边单元 HOMAG-STYLE SCRAPING UNIT		重型基座，水平式刮边带定向吹丝。刀具选用德国乐客R1.5高光刮刀片使边带增亮并减少胶线漏底；	Heavy-duty base, horizontal scraper with directional glue wire blowing. **German LEUCO** R1.5 high-gloss scraping cutter for brighter edges and no glue leakage.
三轴气动平刮和清洁单元 PNEUMATIC FIAT SCRIPING AND CLEANING UNIT		专门针对修边后残留的细微胶线，进行二次精修，刮后板面无胶痕，手感细腻 抛光前可以选择开启清洗装置，设备将自动根据板材位置 喷出清洗剂，更易将板材表面的胶水抛除	It performs secondary fine trimming specially for tiny residual glue lines left after edge trimming. No glue marks remain on the panel after scraping, delivering a smooth delicate touch. Optional cleaning system sprays detergent automatically aligned with panels for effortless glue removal.
伺服磁悬浮水平齐头齐尾单元 MEGNETIC-LEVITATION SERVO HORIZONTAL END CUT UNIT		电机功率：0.55KW*2 台 12000R/min 锯片规格：120*22*36T 水平跟随切削，有效防磕板崩角，适配高光肤感板材 可加工小板窄板，板间距小，生产效率更高 切割端面平整，封边带损耗小	Motor Power: 0.55kW × 2 units, 12000 RPM Saw Blade Spec: 120×22, 36Teeth Horizontal follow-up cutting can effectively prevent panel impact and corner chipping, making it well-suited for high-gloss and skin-touch finish panels. It enables the processing of small-size and narrow-width panels with a small gap between boards, thus improving production efficiency. Clean, flat cut surfaces are achieved, which reduces the

			waste of edge-band material.
磁悬浮伺服单电机跟踪 MEGNETIC-LEVITATION SERVO-DRIVEN SINGLE-MOTOR CORNER ROUND UNIT		响应快，支持高速封边，跟踪不滞后 单头加工，无多机头接刀误差，骨骼线板免垫条 无气缸驱动，不受气压波动干扰 柔性浮动切削，减少磕板崩边，保护高光肤感板材	Boasting rapid response, it supports high-speed edge-banding operation with zero tracking lag. Adopting single-head processing, there is no cutting-joint error caused by multiple heads. No shim strips are needed for skeleton-line panels. Without air-cylinder drive, its performance will not be affected by air-pressure fluctuations. Flexible-floating cutting minimizes panel impact and edge chipping, providing reliable protection for high-gloss and skin-finish panels.

抛光单元 POLISHING UNIT		电机功率：0.37KW*4 台 2840R/min 抛光轮快速对封边条修除部分打磨抛光，使封边带光滑圆润，抛光 轮接触面积大. 采用专利结构设计，增加直线导轨，每次更换抛光轮节省20 分钟。	Motor Power: 0.37kW × 4 units, 2840 RPM The polishing wheels rapidly sand and polish the trimmed sections of edge banding to create a smooth, rounded finish with large contact area between wheels and strips. Designed with patented structure and linear guide rails, it **cuts 20 minutes off** each polishing wheel replacement.
机身单元 FRAME BODY UNIT		机架以及钢轨都经过退火处理，目的为了消除金属焊接中的残余应力，提高稳定性和使用寿命； 钢轨外圆弧采用一体加工成型，导轨工作面经过激光淬火， 硬度可到50HRC，目的为了提高其耐磨性，抗疲劳性和使用寿命； 一体钢梁中间不拼接安装， 而且都经过五面体龙门加工中心加工成型， 因此保证了精度、耐用性以及稳定性。	Frame and steel rails are **annealed** to remove welding residual stress for higher stability and longer service life. Steel rails feature one-piece outer arc machining; laser-quenched rail surfaces hit **50 HRC** hardness for superior wear & fatigue resistance. Integral unspliced steel beams are processed via 5-face gantry machining center, ensuring reliable precision, durability and stability.
重型钢梁履带式送料压板单元 HEAVY STEEL BEAM TRACK FEEDING PRESS UNIT		重型钢梁履带式送料压板单元 大面积同步压紧输送，送料极稳，不跑偏不抖动 更好保护面板，不易压痕刮伤 大小板兼容性强，窄板・小板・薄板・厚板都能平稳过板	Heavy Steel Beam Track-type Feeding & Pressing Unit Large-area synchronous pressing & conveying ensures extremely stable feeding without deviation or vibration. It provides superior protection for panels, effectively preventing indentations and scratches. Wide compatibility with panels of all sizes; narrow sheets, small boards, thin and thick plates can all pass through stably.

伺服输送单元 TRANSFER UNIT		伺服功率：7.5KW*1 台 采用大扭矩大功率伺服电机； 总线伺服传输位置更快，PLC响应更及时，做到各加工动作精准工作保证板材输送有力，不卡板，输 送平稳静音	Servo Power: One unit of 7.5 KW This machine is equipped with a high-torque, high-power servo motor. The field-bus-based servo system delivers faster position signal transmission and more timely PLC response. Each machining action can be executed with high precision. It provides powerful driving force for panel conveyance, preventing board jamming and realizing stable, low-noise transportation.
伺服升降单元 LIFTING UNIT		汇川总线0.4kw伺服配置减速机传动，涡轮连接采用更高标准的刚性联轴器抱死使每个升降盒跟伺服发出位置一致，搭配编码器记忆可以完成各不同厚板件的快速定位	It adopts Inovance field-bus-type 0.4 kW servo with reducer transmission. The worm-gear joint is locked by a high-standard rigid coupling, which guarantees that the actual position of each lifting box is fully consistent with the position signal sent by the servo. Combined with encoder memory function, rapid positioning can be realized for work-pieces with different thickness.
升降立柱单元单元 LIFT COLUMN UNIT		整机配置五套重型高强度大立柱并且均采用涡轮蜗杆滑轨升降装置，受力均匀，重复升降高精准无间隙 让预压梁保持统一压力	The complete machine is furnished with five sets of heavy-duty high-strength large upright columns. Each column adopts a worm-gear slide-rail lifting mechanism. Uniform stress distribution and high-precision repeatable lifting without backlash ensure the pre-press beam maintains constant pressure.

30L气压稳定系统 30L AIR PRESSURE STABILIZATION SYSTEM		30L气压稳定系统 机身内部放置有两个独立的储气罐，气压在使用前需经过内部的储 气罐稳定压力后再分散到设备需要使用气的地方	30L Air Pressure Stabilization System Two independent air storage tanks are installed inside the fuselage. Before use, the air pressure needs to be stabilized through the internal storage tanks before being distributed to the places where the equipment requires air.
电器单元 ELECTRICAL UNIT		变频器部分采用汇川股份集成式总线变频控制； 电器部分采用德力西	The core frequency converter part uses **Inovance's** integrated bus frequency control. The electrical part uses **Delixi**.
编码器单元 ENCODER UNIT		用霍尼韦尔编码器，实时记录板材输送位置及实时速度	Uses **Honeywell encoder** to record the position and real-time speed of the sheet material during conveyance.
气动接头单元 AIR PIPE FITTING UNIT		整机气管气动接头采用德国费斯托品牌，进气系统适配带电显示	Pneumatic pipe fittings are branded **Festo from Germany**, and the air intake system is equipped with power indicator display.
噪音控制系统单元 NOISE CONTROL SYSTEM UNIT		机身内部覆盖了大面积的消音棉 机器工作时关闭机器舱门，可以有效隔绝噪音，对操作人员的听力不会造成损伤	The interior of the equipment is fully lined with wide sound-absorbing foam. When the machine is running, closing the cabinet compartment door achieves excellent noise isolation and safeguards operators against hearing impairment.