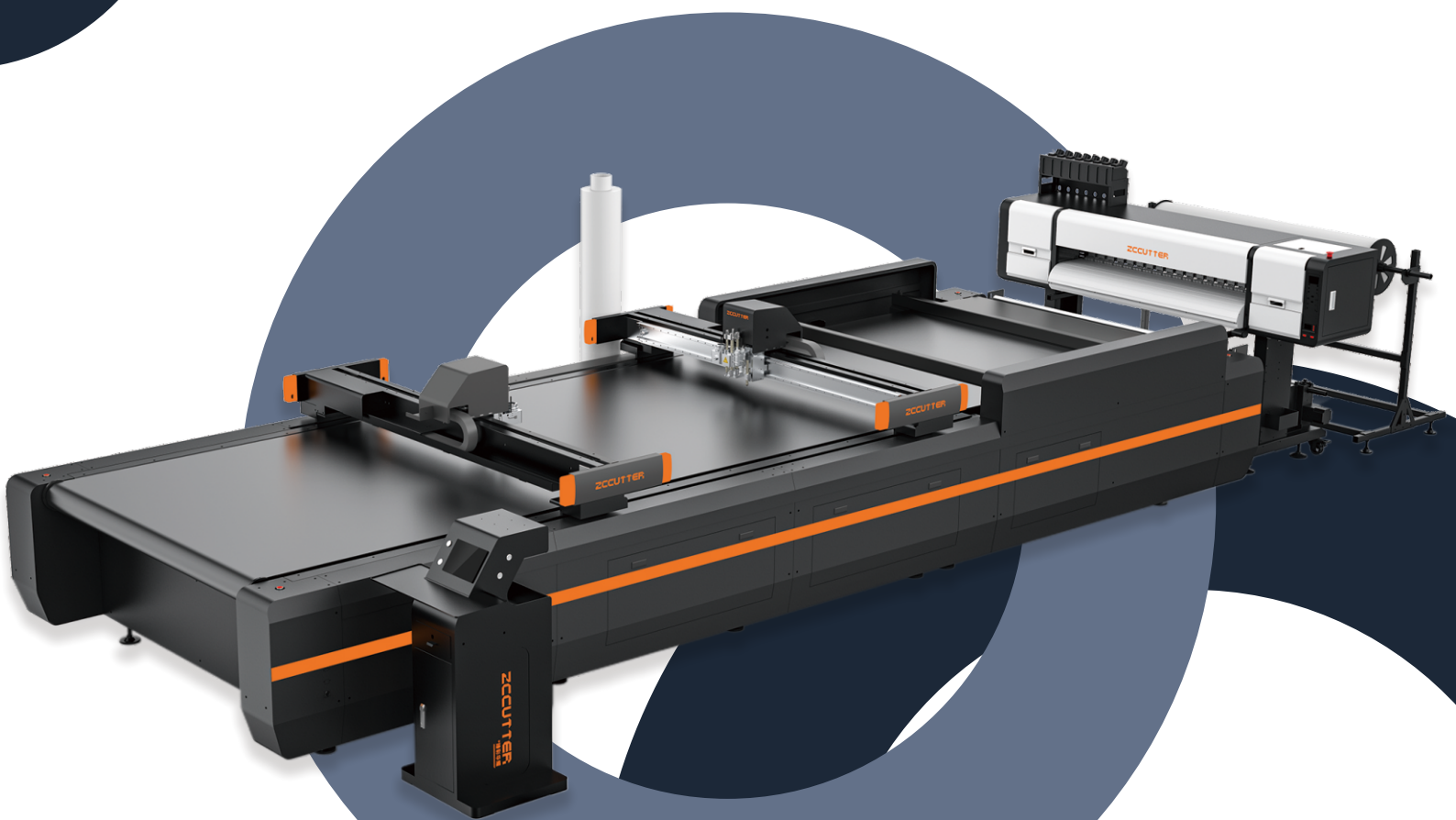




引领数字切割浪潮

LEADING THE WAVE OF DIGITAL CUTTING



华耀数控科技
HUAYAO CNC TECH

 更多产品
More Products

ZCRD 数字切割机系列



Double - beam
Tool Holder Series
ZCRD 双横梁多刀座系列

ZCRD系列数字振动刀切割机, 集成了振动刀切割、压轮、V槽、半穿刀、双冲孔装置、CCD巡边定位、投影仪、数码相机排版定位、自动送料、自动纠偏等多项专利技术。它不仅功能强大,而且操作简单,一机多能,非常方便。更值得一提的是这款切割机采用了先进的双横梁双刀座数字控制技术,可以精确地切割各种柔性材料。无论是布料、皮革、纸板还是各类发泡材料,都能轻松应对。双倍产能,更智能更高效益。

The ZCRD series digital vibration knife cutting machine integrates multiple patented technologies such as vibration knife cutting, pressure wheel, V-groove, half piercing, double punching device, CCD edge inspection and positioning, projector, digital camera layout and positioning, automatic feeding, and automatic deviation correction. It is not only powerful, but also easy to operate, with multiple functions for one machine, making it very convenient. It is worth mentioning that this cutting machine adopts advanced digital control technology with double crossbeams and double cutterbeds, which can accurately cut various flexible materials. Whether it's fabric, leather, cardboard, or various types of foam materials, they can easily handle it. Double production capacity, more intelligent and cost-effective.

生产配置

Production Configuration

静台/滚台二种型式;
Two types of static/rolling tables

0-60mm厚度(提供15/60/100mm 三种定制高度);
0-60mm thickness(available in three customized heights of 15/60/100mm)

电动/气动振动枪互换机座;
Interchangeable base for electric/pneumatic vibration guns

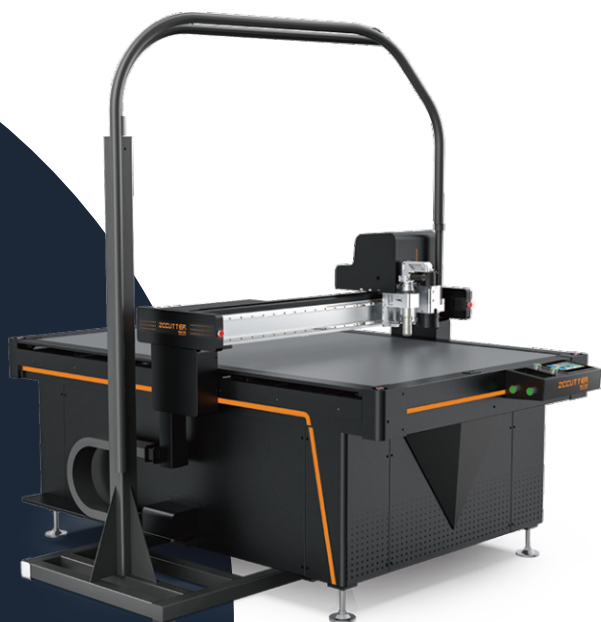
激光定位,可加装CCD工业相机;
Laser positioning, can be equipped with CCD industrial camera

可选配压轮/V槽切割刀具;
Optional pressure wheel/V-groove cutting tool

可选配半透刀/直刀/笔等工具;
Optional tools such as semi transparent knife/straight knife/pen

可加装自动送料系统。
Can be equipped with an automatic feeding system

ZCRC 数字切割机系列



Three Holders Series
ZCRC 组合双刀座系列

ZCRC系列数字切割机可加工厚度0-60mm的材料。根据用户需求, 可为 ZCRC 系列定制高度为 0-100mm 高度的横梁, 满足更多领域的应用。

the ZCRC series digital cutting machine can process materials with a thickness of 0-60mm. According to user needs, beams with a height of 0-100mm can be customized for the ZCRC series to meet more applications in various fields.

卓越性能和精密性 Excellent Performance And Precision

ZCRC 系列数字切割机的整体生产效率在市场上无可比拟, 通过智能控制技术、结实的机器组件和精巧的切割技术, 切割与雕刻协同生产, 实现这一目标, 需所有组件紧密相互协调。

The overall production efficiency of the ZCRC series digital cutting machine is unparalleled in the market. Through intelligent control technology, sturdy machine components, and exquisite cutting technology, cutting and carving are produced in collaboration to achieve this goal, requiring close coordination among all components.

高水平的质量实现高的生产效益

High Level of Quality to Achieve High Production Efficiency

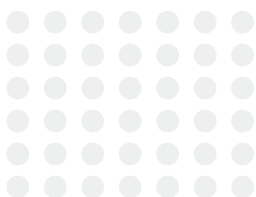
ZCRC系列产品可以定制三组刀座以上, 切割, V槽, 雕刻, 冲孔, 半刀, 直刀, 每把刀都存在微米级的偏差, 失之毫厘, 谬以千里, 臻彩科技在持续破解刀具尺寸误差的难题, 不断接近国际精密加工领域的最高标准。厚薄不拒, 软硬通切, 振动刀切割机领域的大成之作。

The ZCRC series products can be customized with three or more sets of tool holders, including cutting, V-groove, carving, punching, half knife, and straight knife. Each knife has a micrometer level deviation which is negligible and can lead to errors. Zhencai Technology is continuously solving the problem of tool size error and approaching the highest standard in the international precision machining field. Thick and thin, soft and hard through cutting, a masterpiece in the field of vibration knife cutting machines.



引领数字切割浪潮

LEADING THE WAVE OF DIGITAL CUTTING



温州华耀数控科技有限公司

Wenzhou Huayao CNC Technology Co., Ltd



中国浙江省温州市瓯海区北纬一路43号

No.43, North Weiyi Road, Haochuang Future Innovation Park,
Wenzhou City, Zhejiang Province

ZCCUTTER切割机不仅仅是一款普通的振动刀切割机，华耀科技的工程师们通过不断探索，成功地将半透刀、电主轴、直刀、刻字刀、V槽刀等多种技术融入其中，让这款切割机拥有更广泛的应用场景和更高的切割效率。无论是广告、标识、装修、布料、皮料、EVA等材料，还是纸艺模型制作、工艺品加工等行业，ZCCUTTER振动刀切割机都能轻松应对，展现其独特的优势。

The ZCCUTTER series vibration knife cutting machine, with its advanced flat cutting system, can easily cut semi-rigid and flexible materials, making your cutting work smoother. The machine's movement is accurate and smooth, making it easy to handle various complex cutting tasks. The ZCCUTTER series also offers easy-to-use vibration knife tools and digital solutions, which both small and large enterprises can readily implement.

印刷包装行业 Printing and packaging Industry

ZCCUTTER振动刀切割机专为包装行业提供全流程模切解决方案，支持展示架原型开发及小批量定制生产，精准加工纸箱、彩盒、礼品盒等包装基材，兼容卡纸、瓦楞纸板、PP中空板、EVA泡棉、交联聚乙烯（PE）泡沫等复合材料，实现±0.1mm级高精度切割。

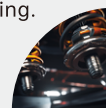
The ZCCUTTER vibration knife cutter provides end-to-end die-cutting solutions for packaging industry, enabling prototyping and small-batch production of cartons, gift boxes, and display structures. It achieves ±0.1mm precision cutting for diverse substrates including cardboard, corrugated board, PP hollow sheets, EVA foam, and cross-linked PE foam.



3C电子行业 3C Electronics Industry

ZCCUTTER为3C电子行业提供微米级精密模切，加工双面胶、泡棉胶带、亚克力压敏胶（PSA）等粘接材料，满足屏幕保护膜、摄像头防尘密封圈、电池绝缘标贴等关键组件生产，适配柔性电路板（FPC）等精密电子材料切割。

ZCCUTTER delivers micron-level precision die-cutting for 3C electronics, processing adhesive materials like double-sided tapes, foam adhesive strips, and acrylic PSAs (Pressure Sensitive Adhesives). It produces critical components including display protective films, camera dust-proof seals, and battery insulation labels, with compatibility for FPC (Flexible Printed Circuit) cutting.



新能源行业 New energy Industry

ZCCUTTER面向新能源行业实现动力电池模组核心部件精密加工，涵盖电极片、气凝胶隔热片、三聚氰胺阻燃板等材料成型，同步支持太阳能防护膜、云母散热片等清洁能源组件生产。

ZCCUTTER enables precision processing for new energy applications, specializing in power battery module components like electrode plates, aerogel thermal barriers, and melamine flame-retardant boards. It also manufactures clean energy parts including solar protective films and mica heat dissipation sheets.



汽配行业 Auto parts Industry

ZCCUTTER提供汽车级模切解决方案，覆盖内饰吸音棉、硅胶密封圈、防爆膜等部件加工，支持光学胶（OCA）、增光/扩散膜等车载显示材料精密切割。

ZCCUTTER offers automotive-grade die-cutting solutions for interior acoustic foams, silicone gaskets, and explosion-proof films. It precisely processes in-vehicle optical materials including OCA (Optically Clear Adhesive) and BEF/diffuser films.



ZCBX1816

全自动数码切割机



设备概述

Equipment Overview

在包装定制行业蓬勃发展，个性化、小批量需求激增的当下，华耀科技重磅推出ZCBX1816全自动数码切割机。它开创性地集喷切一体，专为小批量包装定制打造。先进数字切割与数码印刷技术融合，既能满足多样化设计，又能保障高效生产，是企业提升竞争力、开启包装生产新篇的得力助手。

As the customized packaging industry booms with surging demands for personalized and small - batch production, Huayao Technology launches the ZCBX1816 fully automatic digital cutting machine. It combines spraying and cutting, designed for small - batch packaging. With advanced digital cutting and printing tech, it meets diverse design needs and ensures high - efficiency production, helping enterprises boost competitiveness and start a new packaging production chapter.

设备尺寸 Dimensions

长 7.5米、宽 2.28米、高1.8米。占地面积相对较小，便于在各类生产场地安装和使用，无论是空间有限的小型工厂，还是布局紧凑的大型车间，都能轻松容纳。

7.5m (L) × 2.28m (W) × 1.8m (H). Its small footprint allows easy installation and use in various production sites, from small factories to large workshops.

设备重量 Weight

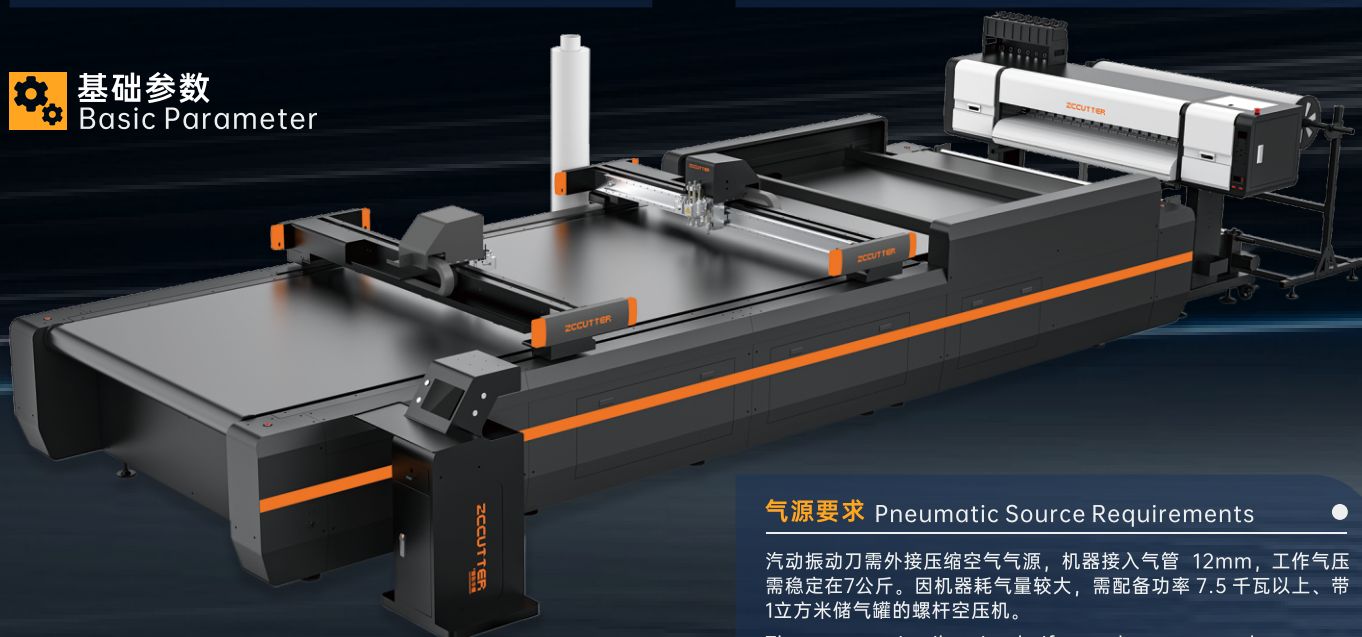
约 2000 千克结构稳固，运行稳定。在高速运转和长时间工作过程中，能够保持良好的稳定性，减少因设备震动等因素对生产造成的影响。

About 2000 kg. The stable-structured machine runs steadily, maintaining stability during high - speed and long-term operation, reducing production - affecting vibrations.



基础参数

Basic Parameter



电源要求 Power Requirements

电源盒，380V带零线(三相五线制)，线径不低于6平方，装在机器旁边。

Power Requirements: The power supply box adopts a three - phase five - wire system with 380V and a neutral wire. The wire diameter should be no less than 6 square millimeters, and it should be installed beside the machine.

气源要求 Pneumatic Source Requirements

汽动振动刀需外接压缩空气气源，机器接入气管 12mm，工作压力需稳定在7公斤。因机器耗气量较大，需配备功率 7.5 千瓦以上、带 1立方米储气罐的螺杆空压机。

The pneumatic vibrating knife needs an external compressed air source. The machine's inlet air pipe is 12mm, and the working air pressure should be stable at 7 kgf/cm². Due to the high air consumption of the machine, a screw air compressor with a power of over 7.5 kW and a 1 - cubic - meter air storage tank is required.



01 机架结构 Machine Frame



整体式龙门机架采用加厚方钢焊接工艺，有效抑制高速运动惯性，防止机架变形与谐振，确保设备稳定运行，保障 $\pm 0.05\text{mm}$ 级切割精度。

The integrated gantry frame adopts thickened square steel welding technology, effectively suppressing high-speed inertia, preventing frame deformation and resonance, ensuring stable operation with $\pm 0.05\text{mm}$ cutting accuracy.

02 传动系统 Drive System



斜齿导轨+渗氮合金齿条传动结构，实现 $\pm 0.02\text{mm}$ 重复定位精度。

The helical gear guide rail + nitrided alloy rack drive system achieves $\pm 0.02\text{mm}$ repeat positioning accuracy.

03 真空吸附 Vacuum Hold-Down



9kW涡轮增压吸风系统配合智能分区控制，提供 $\geq 65\text{kPa}$ （可调）局部吸附力，可固定最小 $5\text{mm} \times 5\text{mm}$ 微型工件，材料位移 $\leq 0.1\text{mm}$ 。

The 9kW turbocharged suction system with intelligent zoning control delivers $\geq 65\text{kPa}$ (adjustable) localized vacuum, securing miniature workpieces ($5\text{mm} \times 5\text{mm}$ min.) with $\leq 0.1\text{mm}$ displacement.

04 多刀头系统 Multi-Tool System



双横梁双刀座架构，支持电动/气动振动刀、压痕轮、V槽刀等模块化快换（换刀时间 $< 15\text{s}$ ），兼容卡纸至 10mm 厚瓦楞纸板。

Dual-beam dual-tool architecture supports modular quick-change ($< 15\text{s}$) between electric/pneumatic vibrating knives, creasing wheels, and V-groove tools, compatible with materials from cardstock to 10mm corrugated board.

05 切割效率 Cutting Efficiency



最高速度 100m/min ，加速度 1.5G ，单日产能提升 300% （对比传统模切机），交货周期缩短 40% 。

100m/min max speed with 1.5G acceleration increases daily output by 300% (vs. traditional die-cutters), reducing lead time by 40% .

06 加工精度 Precision



线性光栅闭环控制，定位精度 $\pm 0.02\text{mm}$ ，重复精度 $\pm 0.05\text{mm}$ ，支持 0.2mm 线宽复杂图形切割。

Linear encoder closed-loop control ensures $\pm 0.02\text{mm}$ positioning accuracy and $\pm 0.05\text{mm}$ repeatability, capable of cutting intricate 0.2mm -width patterns.

07 多功能加工 Multi-Functionality



多组功能头（含切割、压轮、半刀、V槽、笔等），兼容 $0.1\text{--}10\text{mm}$ 厚度材料，实现切割/压痕/绘图一体化作业。

Multiple sets of functional heads (including cutting, pressing wheel, half knife, V groove, pen, etc.), handle materials from 0.1mm to 10mm thickness for integrated cutting/creasing/markings.

08 智能定位 Smart Positioning



激光预定位+CCD视觉实时纠偏（精度 $\pm 0.01\text{mm}$ ），废品率 $\leq 0.3\%$ ，材料利用率提升 25% 。

Laser pre-alignment + CCD real-time correction ($\pm 0.01\text{mm}$) reduces scrap rate to $\leq 0.3\%$ and improves material utilization by 25% .



印刷技术参数 Printing Technical Parameter



01 设备配置 Equipment Configuration

联线BX1304高速数码印刷机，配备1300mm宽，爱普生i3200四打印喷头。
Connected to BX1304 high - speed digital printer, equipped with 1300mm wide, Epson i3200 quadruple print heads.

02 打印速度 Printing Speed

每小时18-30平方米。
18-30 square meters per hour.

03 墨水系统 Ink System

采用纳米颜料墨水，CMYKLMCLKLLK 八色配置，色域更广，色彩还原度高。
Adopts Nano - pigment ink, with a CMYKLMCLKLLK eight - color configuration, providing a wider color gamut and high color reproducibility.

04 墨滴控制 Droplet Control

爱普生 3200 - A1 喷头搭配 VSDT 可变墨滴技术，减少颗粒感，提升画面细节。
Epson 3200 - A1 print head with VSDT (Variable Sized Droplet Technology) reduces graininess and enhances picture details.

05 送料系统 Feeding System

豪华版自动放纸系统，承重 200KG，无人值守，节省人力提效。
Deluxe automatic paper - feeding system, with a load-bearing capacity of 200KG, enabling unmanned operation, saving labor and improving efficiency.



上料方式 Feeding System

华耀科技全自动数码切割机，以卓越设计和前沿技术革新纸张纸板加工流程。提供全自动上纸机、桁架上下料系统、机器人协同上下料系统三大方案，满足客户多样需求，确保高效精准作业，摆脱纸张加工的繁琐与低效。

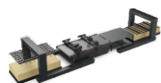
Huayao Technology's Automatic Digital Cutting Machine revolutionizes the paper and cardboard processing workflow with outstanding design and cutting - edge technology. It offers three solutions: automatic paper - loading machine, truss loading and unloading system, and robot - collaborative loading and unloading system to meet diverse customer needs, ensuring high - efficiency and precision operations, and getting rid of the cumbersome and inefficient paper processing.



全自动上纸机 Automatic Paper

底座稳固，导向座智能升降，承托板滑动顺畅。叉车放纸后，驱动机构精准夹纸，推送至堆纸台与切割机台，一气呵成。切割后，滚动机台自动移送纸张至收料台，再人工清废分类，高效便捷。

Loading Machine: Stable base, intelligent lifting guide seat, smooth-sliding supporting plate. After the forklift places the paper, the drive mechanism precisely clamps and pushes it to the paper - stack platform and cutting machine platform seamlessly. After cutting, the rolling machine automatically transfers the paper to the receiving platform, and then manual waste removal and classification are carried out, which is efficient and convenient.



桁架上下料系统 Truss Loading and Unloading System

底座稳固，导向座智能升降，承托板滑动顺畅。叉车放纸后，驱动机构精准夹纸，推送至堆纸台与切割机台，一气呵成。切割后，滚动机台自动移送纸张至收料台，再人工清废分类，高效便捷。

The gantry frame is welded with thickened iron square tubes, featuring strong stability and anti - shaking. With a 3000*1600mm extra - large feeding area, it suits various paper materials. It operates fully automatically, seamlessly connects with the cutting equipment, and improves efficiency and reduces costs.

机器人协同上下料系统 Robot-Collaborative Loading and Unloading System

深度融合机械传动、控制系统、传感检测以及先进的视觉识别技术，由机器人本体、专业工装夹具、高效输送线等关键部件构成。凭借精准的抓取和搬运能力广泛应用于各类制造业场景，助力工件实现高效流转，为生产流程注入强大动力。

Integrates mechanical transmission, control, sensor detection, and visual-recognition technologies, consisting of the robot body, fixtures, conveyor lines, etc. It accurately grabs and transports, is widely used in manufacturing, facilitates the efficient flow of workpieces and empowers the production process.

ZCRB 双刀互移系列

SwiftDual Series



ZCRB双刀互移数字切割机是一款极具性价比的设备。它采用航空铝合金横梁，机架一体焊接成型，经五面龙门铣一次性加工，确保了机械精度。铝蜂窝结构吸附平台采用齿轮齿条传动，并配备进口纤维毛毡，外观辨识度极高。该设备拥有两组刀座，可同时切割两片材料，极大地提高了生产效率。

The ZCRB (SwiftDual Series) double - blade mutual - displaceme - nt digital cutting machine is a highly cost - effective piece of equipment. It features aviation aluminum - alloy beams. The frame is integrally welded and formed, and processed in one go by five - sided gantry milling, ensuring mechanical precision. The aluminum honeycomb structure adsorption platform adopts gear - rack transmission and is equipped with imported fiber felt, boasting a highly recognizable appearance. With two sets of tool holders, the machine can cut two pieces of materials simultaneously, significantly enhancing production efficiency.

■ **生产配置**

Production Configuration

静台/滚台二种型式;
Two types of static/rolling tables

0-60mm厚度(提供15/60/100mm 三种定制高度);
0-60mm thickness(available in three customized heights of 15/60/100mm)

电动/气动振动枪互换机座;
Interchangeable base for electric/pneumatic vibration guns

激光定位,可加装CCD工业相机;
Laser positioning, can be equipped with CCD industrial camera

可选配半透刀/直刀/笔等工具;
Optional tools such as semi transparent knife/straight knife/pen

可加装自动送料系统。
Can be equipped with an automatic feeding system

ZCRB 组合双刀座系列

TechDuo Series



ZCRB组合双刀座系列数字切割机集成了多项专利技术，包括振动刀切割、压轮、斜切刀、V槽刀、半穿刀、CCD工业相机巡边定位以及自动送料等功能。这些技术使该机器在包装、印刷、广告、电子产品制造、汽车零部件制造等领域得到广泛应用，成为打样和小批量定制生产的先进设备。它不仅能切割纸板、塑料、KT板等常见材料，还能处理皮革、毛绒布、EVA泡棉等特殊材料。

The ZCRB (TechDuo Series) digital cutting machines integrate multiple patented technologies, including vibration - knife cutting, pressure wheel operation, oblique - cutting knife function, V - groove knife function, semi - piercing knife function, CCD industrial - camera edge - inspection positioning, and automatic feeding functions. These technologies enable this machine to be widely applied in fields such as packaging, printing, advertising, electronic - product manufacturing, and automotive - parts manufacturing, making it an advanced device for sampling and small - scale customized production. It can cut not only common materials like cardboard, plastic, and KT board but also special materials such as leather, plush cloth, and EVA foam.

■ **生产配置**

Production Configuration

静台/滚台二种型式;
Two types of static/rolling tables

0-60mm厚度(提供15/60/100mm 三种定制高度);
0-60mm thickness(available in three customized heights of 15/60/100mm)

电动/气动振动枪互换机座;
Interchangeable base for electric/pneumatic vibration guns

激光定位,可加装CCD工业相机;
Laser positioning, can be equipped with CCD industrial camera

可选配压轮/V槽切割刀具;
Optional pressure wheel/V-groove cutting tool

可选配半透刀/直刀/笔等工具;
Optional tools such as semi transparent knife/straight knife/pen

可加装自动送料系统。
Can be equipped with an automatic feeding system