

CCD CAMERA LASER MARKING MACHINE WITH AUTO GALVO HEAD



CX-HV 视觉互移打标机



首先在 EZCAD 打标软件里做好相应的镭雕图档并居中图档。在视觉软件里通过提取边框或者指定特征，来作为位置抓拍的基准。调整好激光雕刻位置，设定好抓取范围以及抓取的最大数量。然后就可自动运行了。只要在设定图像捕捉范围内，产品可以任意角度摆放，都能自动精准的进行激光雕刻。

First, in the EZCAD marking software, do the corresponding laser marking file and center the image file. In the visual software by extracting the border or specifying features, as a benchmark for location capture. Adjust the laser marking position, set the grab range and the maximum number of grabs. Then it will run automatically. As long as the product can be placed at any angle within the set image capture range, laser marking can be performed automatically and accurately.

设备优势 / Equipment Advantages

1. 移动打标最大程度上减少了打标过程中人工放料摆位的干预, 提高自动化水平。
 2. 高精度、高像素的视觉系统辅助, 重复定位精度可达 $\pm 0.01\text{mm}$, 视觉识别速度 0.01s 。
 3. 采用高精度伺服丝杠传动系统, 安装调试时通过精密准直仪测试, 精度稳定在 $\pm 0.05\text{mm}$ 以内。
 4. 整体包围式机架, 符合欧洲安全标准。
 5. 视觉系统可兼容各种类型激光打标机, 如光纤, 紫光, CO_2 , 绿光等。
1. Machine minimizes the intervention of manual operation during the marking process and improves the level of automation.
 2. High-precision with repeatable positioning accuracy of $\pm 0.01\text{mm}$, high-pixel vision system assisted with visual recognition speed of 0.01s .
 3. The high-precision servo screw drive system is used, and machine passed the Precision Collimator Test during installation and debugging, and the cutting accuracy is stable within $\pm 0.05\text{mm}$.
 4. The overall enclosed frame meets European safety standards.
 5. The vision system is compatible with all types of laser marking machines such as fiber laser, violet laser, CO_2 laser, green laser and more.

应用领域 / Applicable Fields

高端芯片、精密电子部件智能识别打标, 汽车按键、不规则精密零部件打标。
Ideal for high-end chips marking, precision electronic components marking, car buttons marking, irregular shaped precision parts marking with smart identification system.

技术参数 / Technical Parameters

型 号	CX-HV	Model	CX-HV
激光输出功率	$\leq 50\text{W}$ IPG激光器	Laser Power	$\leq 50\text{W}$ IPG Laser Source
激光波长	$1.06\mu\text{m}$	Laser wavelength	$1.06\mu\text{m}$
激光重复频率	$1.4\text{-}1000\text{KHz}$	Laser repetition frequency	$1.4\text{-}1000\text{KHz}$
打标范围	$105\text{mm}\times 105\text{mm}$	Engraving range	$105\text{mm}\times 105\text{mm}$
打标深度	$\leq 0.4\text{mm}$	Marking depth	$\leq 0.4\text{mm}$
打标线速	$\leq 8000\text{mm/s}$	Marking speed	$\leq 8000\text{mm/s}$
最小线宽	0.05mm	Minimum line width	0.05mm
最小字符	0.3mm	Minimum character	0.3mm
重复精度	$\pm 0.002\text{mm}$	Repeatability	$\pm 0.002\text{mm}$
整机耗电功率	1200W	Whole power	1200W
环境温度	$15\text{-}35^\circ\text{C}$ 之间	Ambient temperature	$15\text{-}35^\circ\text{C}$
湿度	$40\%\sim 80\%$, 无结露	Humidity	$40\%\sim 80\%$, No condensation
供电电网	$220\text{V}; 50/60\text{Hz}$	Power supply	$220\text{V}; 50/60\text{Hz}$
供电电网波动	$\pm 5\%$, 电网地线符合国际要求	Power fluctuation	$\pm 5\%$, Grid ground wire meets international requirements
电磁信号干扰	设备附近不能有强烈电磁信号干扰。 安装周围应避开高功率无线电台位置	Electromagnetic signal interference	There should be no strong electromagnetic interference near the equipment. Avoid high-power radio locations around the installation
地基振幅	小于 $50\mu\text{m}$; 振动加速度: 小于 0.05g 。 避免有冲压机等震动强烈机械设备在附近	Ground amplitude	$\leq 50\mu\text{m}$; Vibration acceleration: $\leq 0.05\text{g}$. Avoid the vibration of strong mechanical equipment such as punching machines nearby
烟尘	设备环境要保证无烟无尘, 避免金属粉尘、油污等严酷的工作环境。	Smoke	The environment of the equipment should be smoke-free and dust-free, avoiding the harsh working environment such as metal dust and oil.

产品展示 / Sample show

