



Intelligent metal detection equipment

# 智能金属探测设备

山东华邦智能科技有限公司

Shandong Huabang Intelligent Technology Co., Ltd.

# 公司简介

山东华邦智能科技有限公司坐落于美丽的风筝之都山东潍坊，我司与中国科学研究院青岛新能源科技研究所合作共同开发金属检测设备研发、生产和销售的技术型企业。

本公司荣获潍坊市高新技术企业、守合同重信用企业、AAA级信用企业等荣誉称号。公司拥有HB-III、HB-IV、HB-V型金属探测仪获得国家发明专利等资质荣誉，领先国内同行业先进水平，打破了欧美公司对我国金属探测技术的长期垄断，铸就了以“华邦”为品牌的企业形象。

公司通过ISO9001质量管理体系认证，ISO14000环境管理体系认证，ISO45001健康安全管理体系认证。并严格按照国际标准化组织（ISO）体系认证的要求规范企业管理，打造优秀的企业团队，确保产品质量的优良稳定、可靠和技术领先。

公司秉承“节能、环保、科技、领先”的企业价值观，将研发和生产国内乃至国际技术领先的电磁设备作为公司发展的奋斗目标和不变追求。



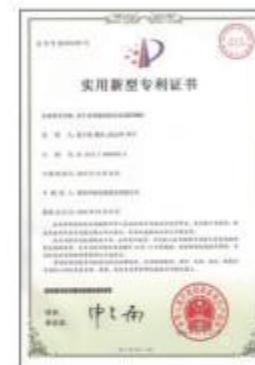
华邦科技

华邦智能科技部分服务客户  
Huabang Intelligent Technology partially serves customers



## 资质荣誉

### Qualifications and honors



产品多样化  
Product diversification



矿山金属探测仪



化工金属探测仪



管道金属探测仪



医药金属探测仪



食品金属探测

品质保障  
Quality assurance

电路板：高端 . 双核设计



全进口检测设备

全自动焊接设备

调试设备

全自动老化箱

电磁兼容测试设备

多举措专利防护  
More measures to protect patents

误报率≤1%

无线通讯干扰



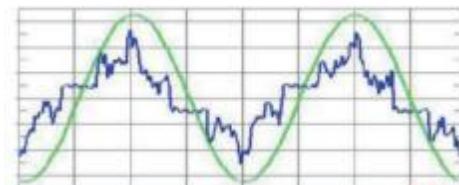
机械振动干扰



电焊干扰

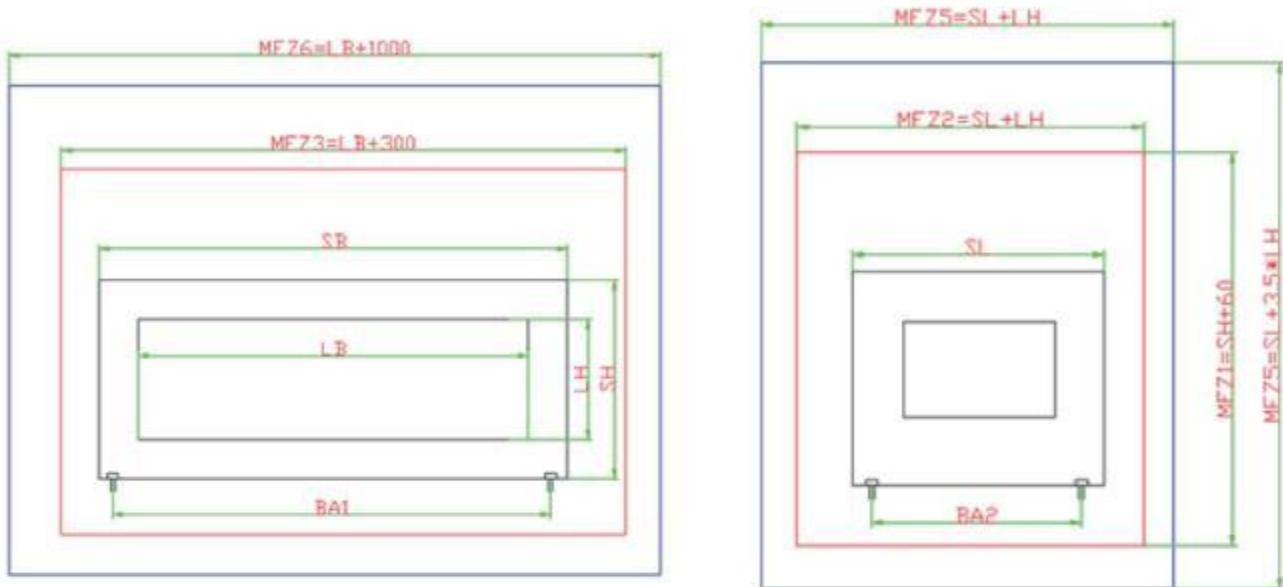


电源谐波干扰



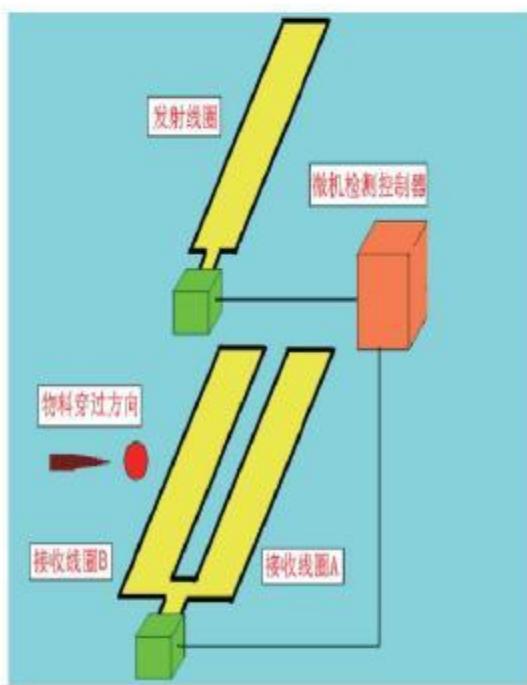
## 性能参数

### Performance parameter



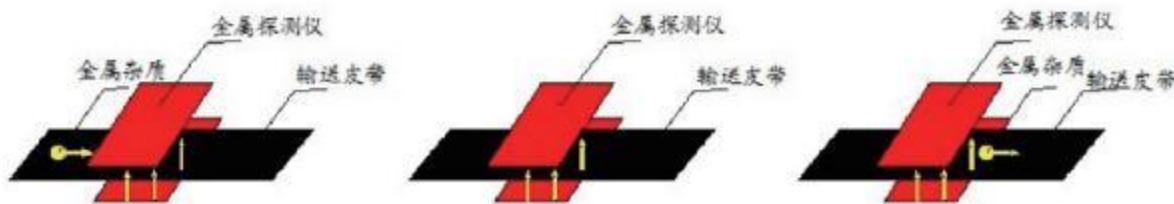
## 工作原理

### Operational principle



1. 一个无线电波发生器(发射线圈), 发射无线电波;  
 2. 二个同名端反接的无线电波接收器 (接收线圈), 两线圈的信号相减得到平衡或零电压, 使空间电磁干扰信号为零, 而且发射线圈的响应也为零;  
 3. 金属异物在接收线圈上通过时使电压不平衡, 因而被检测到。

1. A radio wave generator (transmitting coil) that emits radio waves;  
 2. Two wireless wave receivers (receiving coils) with the same end reversed, whose signals are subtracted to obtain a balanced or zero voltage, resulting in zero spatial electromagnetic interference signal and zero response from the transmitting coils;  
 3. Metal foreign objects are detected due to voltage imbalance when passing through the receiving coil.



金属探测仪产生一个电磁场。

当金属杂质进入电磁场中，测量信号会朝一个方向发生偏转。

当金属杂质离开电磁场时，测量信号会朝另一个方向发生偏转。

当测量信号的两个触发极限均超过设定值时，控制器就会产生一个报警信号。

金属探测器会根据用户的要求，输出多种信号供用户使用。一般会提供一组无源常开、常闭接点。

1. The metal detector generates an electromagnetic field.
2. When metal impurities enter the electromagnetic field, the measurement signal will deflect in one direction.
3. When metal impurities leave the electromagnetic field, the measurement signal will deflect in another direction.
4. When both triggering limits of the measurement signal exceed the set value, the controller will generate an alarm signal.
5. Metal detectors will output multiple signals for users to use according to their requirements. Usually, a set of passive normally open and normally closed contacts will be provided.

## 影响探测仪灵敏度的因素 Factors affecting the sensitivity of detectors

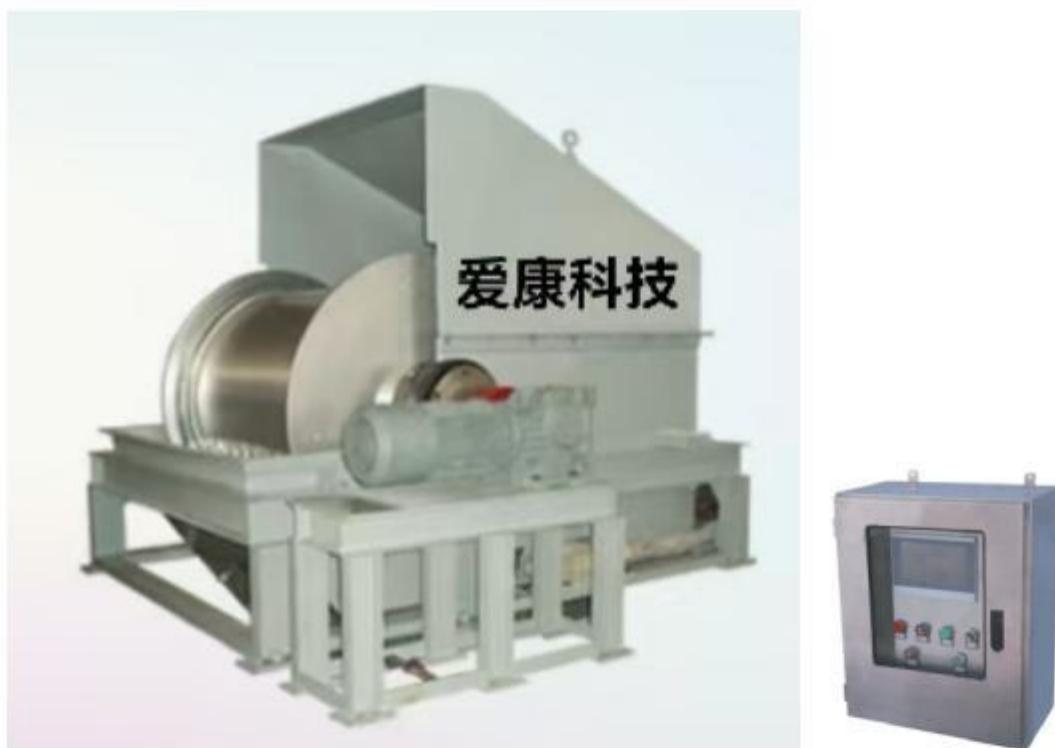


## HB-FLQ金属分离器HB-FLQmetalseparator

### 概述summary

HB-FLQ金属分离器是一种能在物料运输或传送过程中自动拣出金属物块的高效节能探拣设备。当物料中所混杂的金属铁块通过传感器时，金属探测器能及时发出报警信号，并向金属分离器发出指令，将金属物体从物料中分离出来。

HB-FLQmetal separator is an efficient and energy-saving picking equipment that can automatically pick out metal blocks during material transportation or conveying. When the metal iron blocks mixed in the material pass through the sensor, the metal detector can promptly send an alarm signal and issue instructions to the metal separator to separate the metal object from the material.



型号 Model	适应宽带mm Adaptive belt width	外形尺寸AxByC Overall dimensions	整机功率 Total power	整机重量 Total weight	工作制 Work system
HB-FLQ-8	800	920x1050x1000	<5.7KW	约1400kg	连续Continuous
HB-FLQ-10	1000	1070x1250x1050	<5.7KW	约1650kg	连续Continuous
HB-FLQ-12	1200	1120x1500x1250	<5.7KW	约1800kg	连续Continuous
HB-FLQ-14	1400	1400x1700x1500	<115KW	约2700kg	连续Continuous

## HB-III金属探测器HB-III Metal Detector



### 概述summary

HB-III型金属探测器，是一款使用DSP芯片的非金属矿用金属探测器，是我公司在新型金属探测器上的又一突破，采用全新的电路结构及检测方法，解决了常规金属探测器无法检测的不锈钢、耐热钢、高铬钢等非磁性金属，各项技术指标均达到或超过国际标准，是国内工业用金属探测技术的又一次跨越。

HB-III metal detector is a non-metallic mineral detector that uses DSP chips. The use of metal detectors is another breakthrough for our company in the field of new metal detectors. Adopting a brand new circuit structure and detection method, it solves the problem of conventional metal detectors lacking Non magnetic metals such as stainless steel, heat-resistant steel, and high chromium steel detected by the method, and various technologies. All indicators meet or exceed international standards, which is a domestic industrial metal detection technology Another leap.

### 金属探测器的性能特点：

1. 以DSP芯片为核心处理单元,识别准确率高,抗干扰能力极强。解决了电磁干扰所引起的误报警现象;
2. 可检测304不锈钢、耐热钢、高铬钢等非磁性金属;
3. 可自动区分皮带金属接头;
4. 可分辨块状、长棒型金属,并可以设置灵敏度,适用于非磁性物料;
5. 标记定时功能,可延时输出标记动作,实现夹杂金属的准确定位;
6. 支持Modbus现场总线通讯,轻松实现数据联网;
7. 多个10输出接口,可与生产线连接配套使用,实现流水线自动检测;
8. LCD液晶屏显示中(英)文菜单画面操作便捷明了。

### The performance characteristics of metal detectors:

1. Using DSP chip as the core processing unit, it has high recognition accuracy and strong anti-interference ability. Solved the false alarm phenomenon caused by electromagnetic interference;
2. Can detect non-magnetic metals such as 304 stainless steel, heat-resistant steel, and high chromium steel;
3. Can automatically distinguish belt metal joints;
4. Can distinguish block shaped and long rod shaped metals, and can set sensitivity. Suitable for non-magnetic materials;
5. Marking timing function. It can delay the output of marking actions, achieving accurate positioning of mixed metals;
6. Support Modbus fieldbus communication. Easily achieve data networking;
7. Multiple 10 output interfaces can be used in conjunction with the production line to achieve automatic detection on the assembly line;
8. LCD screen display. Chinese (English) menu screen. Easy and clear to operate;

## HB-IV金属探测器HB-IVMetalDetector



### 概述summary

HB-IV型金属探测器是我公司结合国内外客户的实际需求而开发出的一款全新金属探测器，是一款使用 DSP芯片的金属探测器。实现了我国金属探测器质的飞跃，HB-IV型金属探测器将为工业企业节能降耗、安全生产带来巨大的经济效益，必将为“绿色矿山”的发展作出巨大贡献。

HB-IV metal detector is a new metal detector developed by our company according to the actual needs of customers at home and abroad. It is a metal detector using DSP chips. HB-IV metal detector metal detector will bring huge economic benefits for energy saving and safe production in industrial enterprises, it will make great contribution to the development of “Green Mines” .

## 技术指标

### Technical indicators

金属探测器的性能特点：

- 1、以DSP芯片为核心处理单元，识别准确率高，抗干扰能力极强。解决了因电磁干扰所引起的误报警现象；
- 2、可以设置灵敏度，适用于不同的物料(铁矿、煤矿、石料等),对非铁磁性金属也具有良好的检测效果；
- 3、可适用于钢丝带，并自动区分皮带金属接头；
- 4、标记定时功能，可延时输出标记动作，实现夹杂金属的准确定位；
- 5、支持Modbus现场总线通讯，轻松实现数据联网；
- 6、多个10输出接口，可与生产线连接配套使用，实现流水线自动检测；
- 7、LCD液晶屏显示，中文菜单画面，操作便捷明了。

Features of the metal detector:

1. DSP chip as the core processing unit, high recognition accuracy, strong anti-interference ability. The invention solves the false alarm phenomenon caused by electromagnetic interference,
2. Can set sensitivity, is suitable for different materials (iron ore, coal mine, stone, etc.) , and has good detection effect for non-ferromagnetic metals;
3. It is suitable for steel belt and can distinguish belt metal joint automatically
4. Mark timing function, can delay output mark action, realize the accurate position of inclusion metal
5. Support Modbus Field bus communication, easy to achieve data networking,
6. More than 10 output interfaces, can be used with the production line connection, automatic detection pipeline,
7. LCD display, Chinese menu screen, easy to operate.

## HB-V金属探测器HB-VMetalDetector



### 概述summary

HB-V型金属探测器，基于HB-IV金属探测器进行了有力的改进。与HB-IV相比，HB-V金属探测器具有较高的灵敏度和更强的功能。

- 1、可分辨块状、长棒型金属，并分别报警；
- 2、可适用于钢丝带，并自动区分皮带金属接头；
- 3、可适用于金属矿石；
- 4、标记定时功能，可延时输出标记动作，实现夹杂金属的准确定位；
- 5、支持Modbus现场总线通讯，轻松实现数据联网；
- 6、多个10输出接口，可与生产线连接配套使用，实现流水线自动检测；
- 7、LCD液晶屏显示，中(英)文菜单画面，操作便捷明了；
- 8、密码功能；
- 9、现场或中控复位功能。

Summaryhb-v metal detector with powerful improvements based on the HB-IV metal detector. Compared with HB-IV, HB-V metal detector has higher sensitivity and stronger function.

- 1.It can distinguish lumpy and long rod metal and alarm respectively
- 2.It can be used for steel wire belt and can automatically distinguish belt metal joint
- 3.It can be used for metal ore
4. It can be used for marking and timing function,
- 5.Support Modbus fieldbus communication to realize data networking easily
- 6.Multiple 10 output interfaces, which can be connected with the production line, automatic detection to achieve the pipeline;
7. LCD display, Chinese (English) menu screen, easy and clear operation;
8. Password function;
9. Field or central reset function.

# 诚信为本 科创领先



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