

异形插件机

ODD FORM INSERT MACHINE

PRODUCT GUIDE

<http://www.trand.com.cn>



应用领域

APPLICATION AREA



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异形插件机

Odd Form Insert Machine



OIM 系列 SERIES

OIM 是通过模块化设计进行异形元件插入的设备，采用 SMT 贴片技术运用到通孔元器件，高速完成各种异形元件的自动插装，能适应各种连接器、接插件、变压器等。OIM 系列设备配置了多个高精度插件头，灵活性更强的多元化供料系统，最简单、有效地对应不同异型元器件的供料方式；灵活、简便、高效、稳定是 OIM 系列的显著特性。

OIM is a device for the insertion of special-shaped components through modular design. And can adapt to various , connectors, transformers, and so on. The OIM series equipment is equipped with multiple high-precision plug-in heads and a more flexible and diversified feed system, which is the simplest and most effective way to correspond to different type components. Flexibility, simplicity, efficiency, and stability are the remarkable characteristics of the OIM series.



EIM 系列 SERIES

EIM是针对小批量、多品种而开发的经济型机型。在更换产品时由于很多来料都无法确定，我们采用EIM系列机型可以针对常用零件轻松导入，操作简易，低投入，高回报。

EIM is an economical model developed for small batches and multiple varieties. When replacing products, because many incoming materials can not be determined, we use EIM series models to easily handle common parts, easy to operate, low investment, and high returns.

产品特征 | PRODUCT FEATURE



线外编程 Offline Programming

可在插件机外的任一电脑上安装插件机程式编程软件进行编程。
Plug-in programming software can be installed on any computer outside for programming.



数据共享 Data Sharing

插件机的程式数据以及生产数据 (PCB大小, 插件元件数据, 插件坐标等) 可分享给别的设备调用。

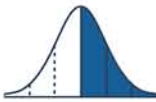
The program data of the machine and the production data(PCB size, component data, coordinates, etc.) can be shared to other device calls.



精度智能校正 Intelligent Calibration of Precision

设备能通过多种精度算法, 并通过生产数据分析设备误差智能校正, 提高设备精度。

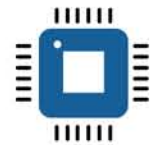
The equipment can improve the accuracy through a variety of precision algorithms and intelligent correction of error of production data analysis equipment.



CPK > 1.33

通过标准的CPK程式, 精度证明过程, 得到CPK测试结果在1.33以上。

Through the standard CPK program, the accuracy proof process, the CPK test result is above 1.33.



识别异形零件多重算法 Multiple Algorithm For Identification Of Odd Form Components

通过多重算法识别元件, 综合分析并矫正结果。

The results of corrective analysis through multiple recognition components.

■ 提高插入率 5%

Increase insertion rate by 5 %

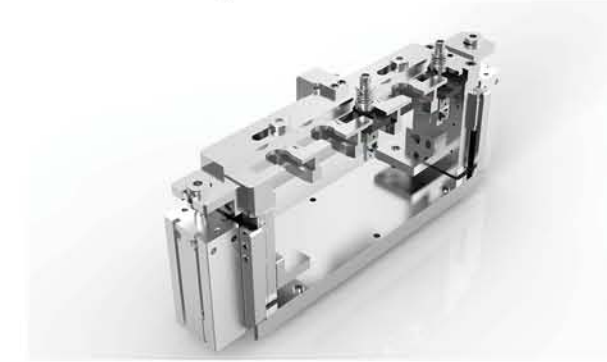
■ 减少生产损耗 5%

Reduction of production losses by 5 %

选项功能 | OPTIONS FEATURE

吸嘴站组件

Auto Nozzle Changer Unit

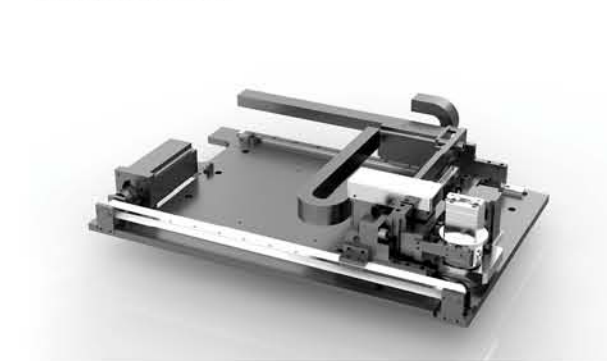


■ 注: 可选配吸嘴站, 根据不同物料, 自动更换取料头。

Optional auto nozzle changer according to different materials, automatically change the head.

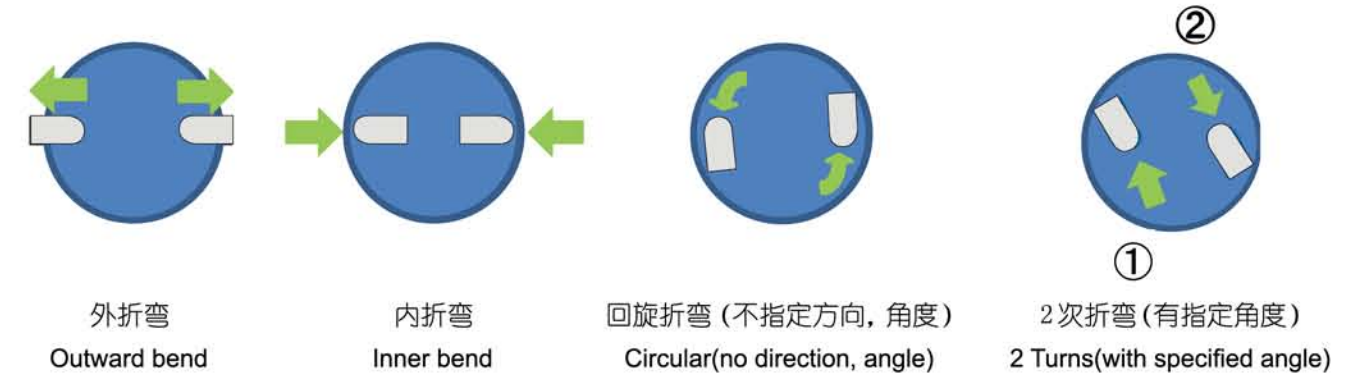
弯脚组件

Lead Clinching Unit



■ 注: 可选配弯脚功能, 实现长脚零件插件后自动弯脚, 弯脚线径需 < 1.0MM, 且漏板脚长不小于 3MM (具体尺寸以最终设计为准)。

Optional lead clinching unit is realizes the lead bending after insertion, for the lead diameter <1.0mm, lead length >3mm (details based on the final design).



如上图所示, 有外折弯、内折弯、回旋折弯、2次折弯 4 种类型。

As shown in the figure, there are 4 types of outward bending, inner bending, circular bending and 2 turns bending.

■ 部分机型适用, 购买前请与当地销售代表取得确认。

Some models are applicable. Please confirm with the local sales representative before purchasing.



规格 Specification		产品型号 Model		
		OIM-3	OIM-2FS	EIM-2
贴插轴数	No. of Insertion Heads	6	4	2
基板尺寸	PCB Size (LxW)	50x50 mm to 300x350 mm	50x50 mm to 500x550 mm	50x50 mm to 300x550 mm
载具尺寸	Carrier Size (LxW)	300x350 mm	500x550 mm	450x550 mm
PCB 厚度	PCB thickness	0.6~2.0 mm		
PCB 最大重量	Max. PCB Weight	2 Kg	5 Kg	2 Kg
最大元件高度	Max. Component height	20 mm	30 mm	25 mm
最大元件宽度	Max. Component Width	28 mm	50 mm	
贴插速度 *1	Speed / 每颗零件 Component	0.6 s - 3.0 s	0.7 s ~ 3.0 s	1 s ~ 3.0 s
贴插精度	Placement Accuracy	3σ, ±0.050 mm		
影像系统 Vision System	Mark CCD (Top)	1		
	Component CCD (Bottom)	3	4	2
顶板机构	Supporting Mechanism	伺服顶板 Servo		
轨道	Conveyor Type	皮带 Belt	链条 Chain	皮带 Belt
轨道 PCB 固定	Conveyor PCB Mounting	夹板式 Edge Clamping		
轨道分段	Conveyor Section	3		1
轨道调宽	Conveyor Adjusting	Auto		
基板通过高度 (上/下)	Conveyor Space (Upper/Lower)	30 mm / 20 mm		25 mm / 20 mm
轨道高度 *2	Conveyor Height	900±20 mm	750 ±20 mm	
最大站位数 Max. Stations*3	编带飞达 Tape Feeder (SMT)	12	6	4
	编带飞达 Tape Feeder (AI)			
	管装飞达 Tube Feeder	8	4	1
	散料飞达 Bowl Feeder			
	盘料飞达 Tray Feeder			
操作系统	Operation System	Windows		
显示器 (主控边)	Monitor Display (Operation Side)	2		2
开门数量	No. Of Door	2 (双边 Double Side)	1 (单边 Single Side)	
机器尺寸	Size(LxWxH)	1300x1550x1560mm		850x1550x1560mm
机器重量	Weight	1730 Kg	1650 Kg	800 Kg
自动换咀模组 *4	Auto Nozzle Changer Unit	选配 Option		
插件弯脚模组 *5	Lead Clinching Unit	选配 Option		
编程功能	Programming	相机示教 Vision Teaching System		
电源	AC Power	380V 20A 50/60HZ		220V 20A 50/60HZ
功率	Apparent power	4.5 KVA		3.5 KVA
气压	Air Supply	6.0~8 Kg/ m ²		
进板方向	PCB Direction	左至右 L to R (右至左 R to L)		
贴插方向	Insertion Direction	0-360 度 Degree		
适用零件	Applicable Component	各种连接器、开关按钮、变压器、端口插座、电容、电阻 等元器件 Connector, Switch, Socket Transformer Coils, Ports, Capacitors, Resistors, Etc		
联机信号接口	SMEMA	标配 Standard Configuration		
MES 对接 *6	MES Connection			
门板安全光栅	Safety Grating (Door)			

*1 视乎不同元件
 *2 可选配工作轨道高度
 *3 飞达数量视乎不同飞达组合
 *4 条件限制
 *5 使用插件弯脚模组会取代顶板机构
 *6 只提供原厂设定信息, 需要配合客户系统可定制 (选配项)

*1 Depends on different components
 *2 Conveyor height of 750 and 900 are available
 *3 No. of feeder depends on the combination
 *4 Conditional
 *5 Lead clinching unit will replace the PCB supporting mechanism
 *6 Only provided the original data format, the rest should be customer made

编带供料器

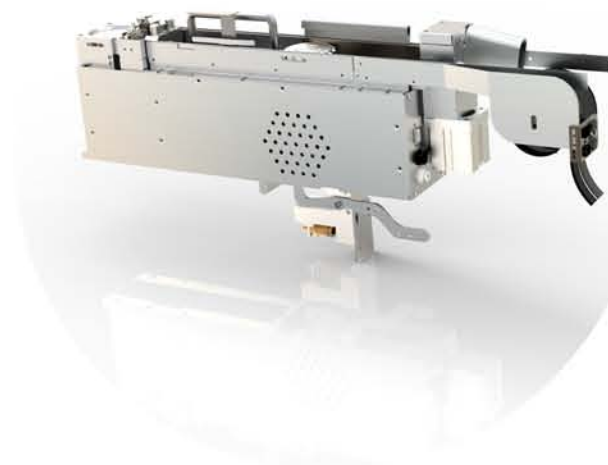
Tape Feeder

- 应用范围广
- 上料速度快
- 工作效率高
- 维护成本低

Wide range of applications
High feed speed
Efficient work
Low maintenance costs

根据来料方式选择合适的供料器，可以自由式搭配更换。在2000年，我们就开始设计和使用震动盘、直震、零件整型、零件成型、编带供料及切断，我们了解和明白零件的特性，及来料的不规范并加以控制和解决，盲插都不是问题。

Choose proper feeder according to its feeding system, it can be matched randomly. In 2000 year, we began to design and use of vibrating plate, straight shock, shear pin parts, parts forming, parts molding, tape feeding and cutting, we understand the characteristics of incoming parts, and is not standardized and controlled and resolved, blind insertion is not a problem.



B

立式编带供料器 201

Radial Tape Feeder

201 立式编带供料器是一款专门为编带电容设计的供料器，该款产品可以在贴片机和插件机上使用，适用电容、LED 等物料，具有通用性强、上料速度快、工作效率高、维护成本低等特点，并且可以根据客户不同需求，进行个性化定制。

The 201 Radial Tape Feeder is specifically designed for vertical lead braiding materials. This feeder can be used on the SMT machine and AI machine. It is suitable for materials like capacitor and LEDs etc. Advantage of universality, fast speed, high efficiency and low maintenance cost. And also can customer made for different needs.



轴向卧式供料器

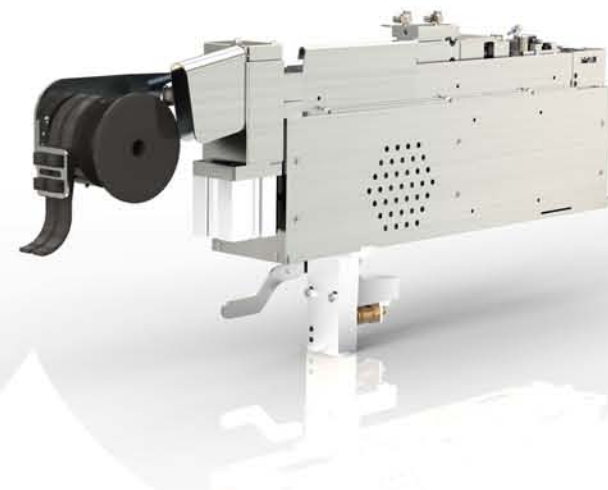
202

Axial Tape Feeder



202 卧式供料器是一款专门为卧式编带设计的供料器，该款产品可以在贴片机和插件机上使用，适用电阻、保险管等物料，具有通用性强、上料速度快、工作效率高、维护成本低等特点，并且可以根据客户不同需求，进行个性化定制。

The 202 Axial Tape Feeder is specifically designed for horizontal lead braiding materials. This feeder can be used on the SMT machine and AI machine. It is suitable for materials like resistor, capacitor and fuse etc. Advantage of universality, fast speed, high efficiency and low maintenance cost. And also can customer made for different needs.



立式编带折 90 度供料器 207

Radial Tape 90 Feeder

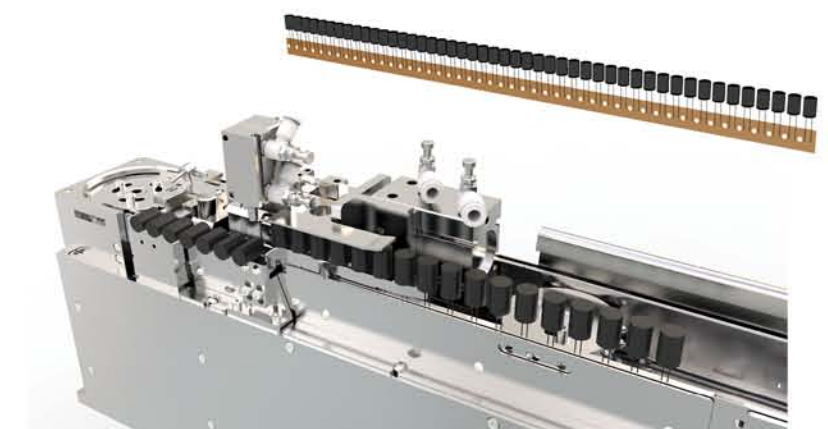
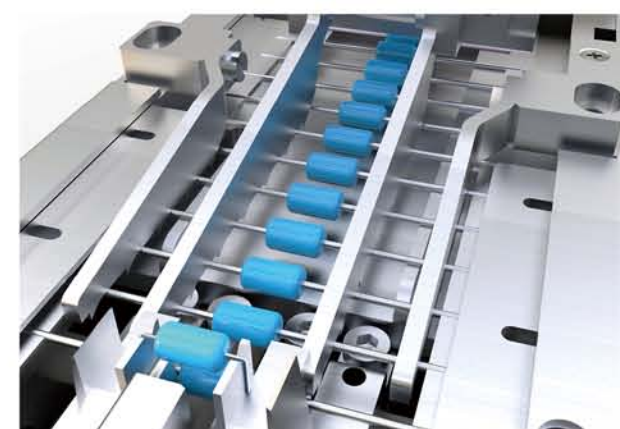
C

207 立式编带折 90 度供料器是一款专门为单编带物料设计的供料器，该款产品自动成型弯角 90 度，可以在贴片机和插件机上使用，适用电容、LED 等物料，具有通用性强、上料速度快、工作效率高、维护成本低等特点，并且可以根据客户不同需求，进行个性化定制。

The 207 Radial Tape Feeder with 90 degree bending mechanism is specifically designed for vertical lead braiding materials which need bending 90 degree before insertion. This feeder can be used on the SMT machine and AI machine. It is suitable for materials like capacitor and LEDs etc. Advantage of universality, fast speed, high efficiency and low maintenance cost. And also can customer made for different needs.



规格 Specification		产品型号 Model			
		210	218	202	207
送料方式 Delivery Model		电动 Electric		气动 Pneumatic	电动 Electric
送料时间 Opening Time		0.8-1.5 Sec/Pcs		1-1.5 Sec/Pcs	0.8-1.5 Sec/Pcs
来料包装 Incoming Material		编带料 Tape Material			
适用零件 Applicable Parts		电容、LED 等 Capcitance、LED Etc		电阻、保险管等 Resistors、Fuses Etc	电容、LED 等 Capcitance、LED Etc
编带孔距 Tape Pich		12.7 mm	15 mm		12.7 mm
编带宽度 Tape Witch		Max 65MM (超过此范围需定做) (Beyond This Range Needs To Be Customized)			
引脚线径 Pin Diameter		0.4 mm - 0.8 mm		0.4 mm - 1.2 mm	0.4 mm - 0.8 mm
适用脚距 Applicable Pitch		2.5 mm - 22.5 mm		L 元件 +3≤ 脚距 ≤30MM (超过此范围需定做) (Beyond This Range Needs To Be Customized)	2.5-10 mm
脚长范围 Foot Length Range		2.7 mm - 7 mm		2.5 mm - 6.5 mm	本体 R+3.5 mm
设备重量 Weight		11.5 Kg	15 Kg		
工作气压 Pressure		0.4PA 以上 0.4MPA The Above			
工作电压 Voltage		DC24V			
工作电流 Current		4A			
工作扭矩 Tprque		2N/M			
适用机器 Applicable Machine		适用任一品牌插件机 For Any Brand Insertion Machines			
外形尺寸 Outline Dimension		696mm(L)X98mm(W)X162mm(H)	705mm(L)X98mm(W)X162mm(H)	696mm(L)X98mm(W)X162mm(H)	
* 不同脚距和本体的零件，需要更换模具。		* Parts with different foot spacing and body need to be replaced with a mold.			



托盘供料器

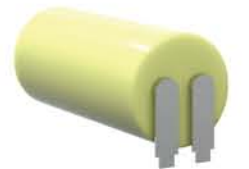
Tray Feeder

- 高效经济
- 安全性强
- 稳定性高
- 通用性强

Efficient economy
Security
Stability
Versatility



PCB 小板
PCB small board



超大电容
Super capacitance



电感线圈
Inductive coil



248

248 托盘供料器是一款专业针对托盘来料开发的供料装置。此产品搭配在插件机上使用，适用 IC、变压器、线圈等物料，具有高效率、通用性、安全性高、稳定性高等特点。我们可以根据客户不同需求，进行个性化定制。

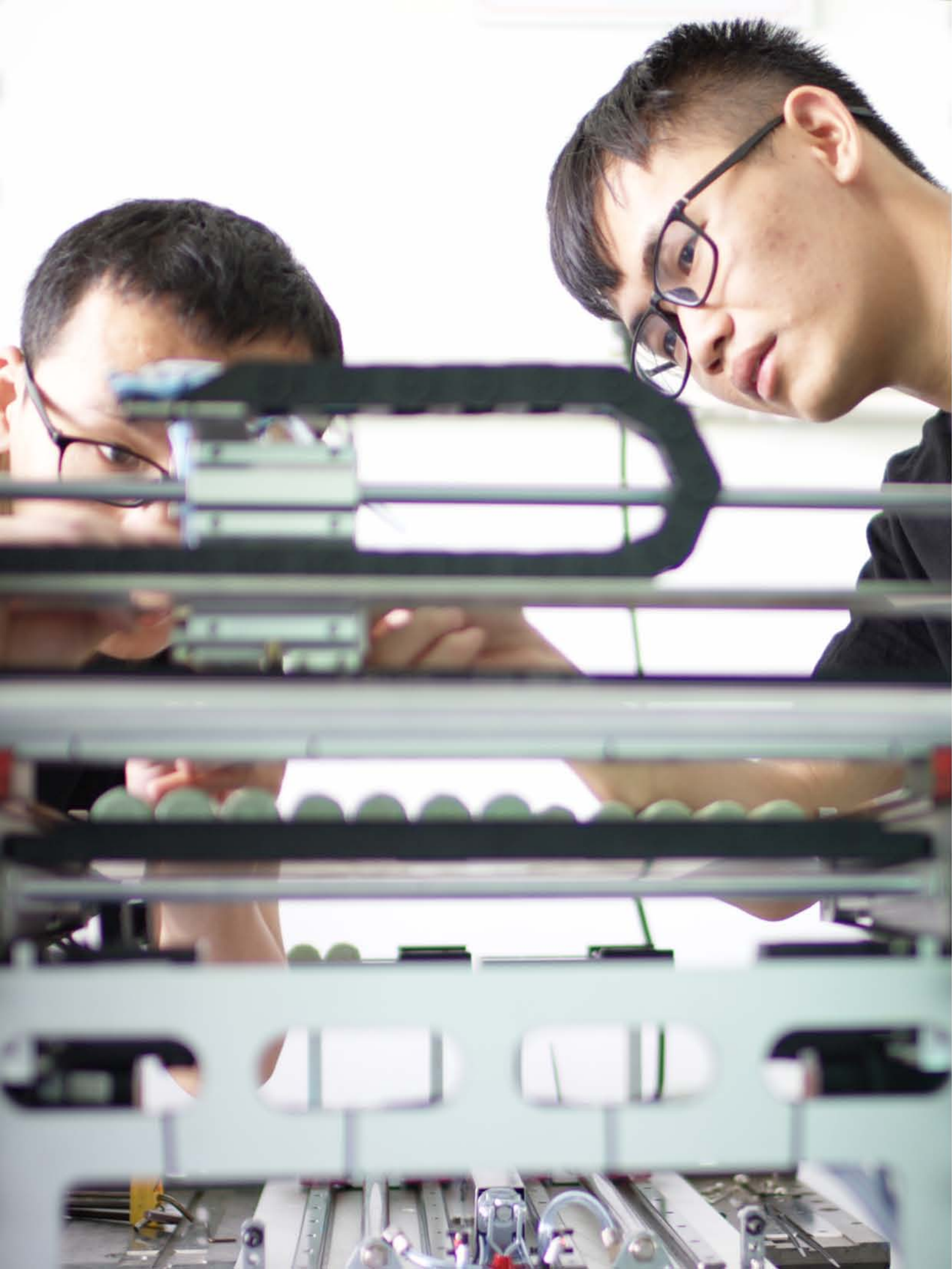
The 248 Tray Feeder is a specialized material supply device developed for pallet incoming material. This product is used on plug-in machines and is suitable for IC, transformer, coil and other materials. It has the characteristics of high efficiency, universality, high safety and high stability. We can be customized according to the different needs of customers.



215&206

215&206 托盘供料器是专业针对托盘来料而开发的供料装置，可运用于贴片机和插件机，适用 IC、变压器、线圈等物料，具有高经济性、安全性高、稳定性高、通用性强等特点。我们可以根据客户不同需求，进行个性化定制。

215 & 206 Tray Feeder is a feed device developed professionally for pallet incoming materials. This product can be used on the patch machine and plug-in machine. It is suitable for IC, transformer, coil and other materials, and has high economy and safety. High stability, strong versatility and other characteristics, according to the needs of customers, can be customized.



规格 Specification		产品型号 Model			
		215	215S	206	248
送盘方式	Delivery Model	电动 Electric		气动 + 电动 Pneumatic + Electric	
出盘方式	Opening Time	5-8 Sec/Pcs		0.8-1.5 Sec/Pcs	
来料包装	Incoming Material	托盘料 Tray Material			
适用零件	Applicable Parts	IC, 变压器, 线圈, 网络接口, USB, 等 IC, Transformers, Coils, Network Interfaces, USB, Etc.			
托盘尺寸	Tray Size(Max)	260mm(L)X136mm(W)	300mm(L)X160mm(W)	200mm(L)X400mm(W)	
托盘重量	Tray Weight	Max 3 Kg (每盘总重量) (Gross Weight Per Tray)			
层高	Interval Height	28 mm	13.9 mm	38 mm	
层数	Number of Layers	10 层 Layers	40 层 Layers	24 层 Layers	
工作气压	Pressure	0.4PA 以上 0.4MPA The Above			
工作电压	Voltage	AC220 V			
功率	Prower	200 W	600 W	1500 W	
适用机器	Applicable Machine	适用任一品牌插件机 For Any Brand Insertion Machines			
适用机器高度	Applicable Machine Height	900 mm	750 mm	900 mm	900 mm / 750 mm
重量	Weight	30 Kg	45 Kg	200 Kg	
外形尺寸	Outline Dimernsion	1420mm(L)X284mm(W)X1160mm(H)	1154mm(L)X791mm(W)X1547mm(H)	650mm(L)X700mm(W)X1600mm(H)	



管料供料器

Tube Feeder

中型物料管料供料器

Tube Feeder For Mid-Size Material



203

203 管装供料器是一款专门为管装物料设计的供料器，该款产品可以在贴片机和插件机上使用，适用电容、变压器、继电器、VGA 等物料，具有通用性强、上料速度快、工作效率高、维护成本低等特点，并且可以根据客户不同需求，进行个性化定制。

The 203 Tube Feeder is a feeder designed specifically for pipe loading materials. This product can be used on patch machines and plug-in machines. It is suitable for capacitors, Transformers, relays, VGA and other materials. It has the characteristics of high versatility, fast feeding speed, high working efficiency, low maintenance cost, and can be customized according to the different needs of customers.

小型物料管料供料器

Tube Feeder For Small-Size Material



222

222 管装供料器是一款专门为小管装物料设计的供料器，该款产品可以在贴片机和插件机上使用，适用 IC, 小晶体等物料，具有通用性强、上料速度快、工作效率高、维护成本低等特点，可增加切脚与整形功能，并且可以根据客户不同需求，进行个性化定制。

The 222 Tube Feeder is a feeder designed specifically for small tube loading materials. The product can be used on the patch machine and plug-in machine. It is suitable for IC, small crystals, etc.. It has the characteristics of high versatility, fast feeding speed, high working efficiency, and low maintenance costs. It can additional configured lead cutting and pre-form function, and can be customized according to the customer's different needs.

大型物料管料供料器

Tube Feeder For Large-Size Material



229

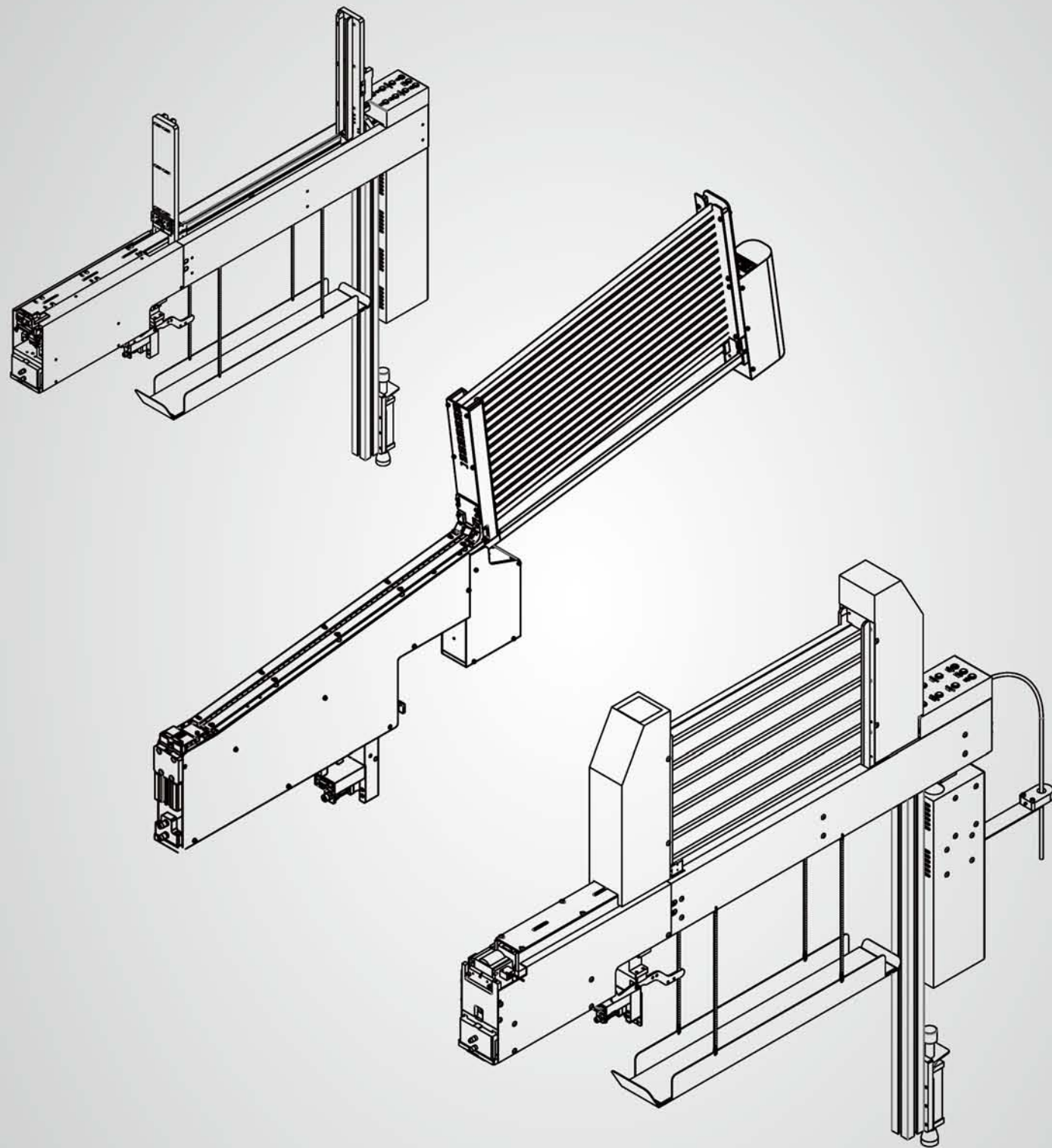
229 管装供料器是一款专门为管装物料设计的供料器，该款产品可以在贴片机和插件机上使用，适用电容、变压器、继电器、VGA 等物料，具有通用性强、上料速度快、工作效率高、维护成本低等特点，并且可以根据客户不同需求，进行个性化定制。



The 229 Tube Feeder is a feeder designed specifically for pipe loading materials. This product can be used on the patch machine and plug-in machine. It is suitable for capacitors, Transformers, relays, VGA and other materials. It has the characteristics of high versatility, fast feeding speed, high working efficiency, low maintenance cost, and can be customized according to the different needs of customers.

- 高效经济
- 安全性强
- 稳定性高
- 通用性强

Efficient economy
Security
Stability
Versatility



TUBE FEEDER APPLICATION



规格 Specification		产品型号 Model					
		203	228	229	210	222	237
送料方式	Delivery Mode	电动 Electric					
送料时间	Opening Time	0.8-1.5 Sec/Pcs				1 Sec/Pcs	
来料包装	Incoming Material	管装料 Tube Loading					
适用零件	Applicable Parts	继电器、变压器等 IC Relay、Transformer More					
适用尺寸	Applicable Size	Max 30X30X30 mm		30X30X30 mm / 50X50X50 mm		Max 30X30X30 mm	
最大承重	Weight Capacity	Max 4 Kg		Max 10 Kg	Max 4 Kg	Max 2 Kg	
切脚整形	Sliced Foot Type	X	0	X	X	X	0
位移	Displacement	0	X	X	X	X	X
最多承载种类	Max Load Type	1	1	1	2	1	1
料管长度	Tube Length	Max 550mm					
设备重量	Weight	25 Kg		30 Kg		12 Kg	
工作气压	Pressure	0.4PA 以上 0.4MPA The Above					
工作电压	Voltage	DC24 V					
工作电流	Current	4A					
工作扭矩	Torque	2N/M					
适用机器	Applicable Machine	适用任一品牌插件机 For Any Brand Insertion Machines					
外形尺寸	Outline Dimension	1197mm(L)X92mm(W)X1217mm(H)		1402mm(L)X92mm(W)X1217mm(H)		1275mm(L)X85mm(W)X650mm(H)	
*“x”代表无, “o”代表有		*“x” stands for none, “o” stands for yes					
*超出 30X30X30mm 的零件, 管子大于 550mm, 需要定制		*Spare parts exceeding 30x30x30mm, tube greater than 550mm, to be customized					

散料供料器

Bowl Feeder

- 高效经济
- 安全性强
- 稳定性高
- 通用性强

Efficient economy
Security
Stability
Versatility



单层供料器
Single Layer Bowl Feeder



205

205 散料供料器是专业针对托盘来料开发的一款供料装置，该款产品可以用在插件机上使用，适用 IC、变压器、线圈等物料，具有高经济性、安全性高，稳定性高、通用性强等特点，可以根据客户不同需求，进行个性化定制。

The 205 Bowl Feeder is a supply device developed professionally for pallet incoming materials. This product can be used on insertion machines.. It is suitable for IC, Transformer, coil and other materials, and has high economy, high security, high stability, and strong versatility. Can be customized according to the customer's different needs.

双层供料器
Double Layer Bowl Feeder



209

209 散料供料器是专业针对散装来料开发的一款供料装置，该款产品可以用在插件机上使用，适用接插件、端子、小型变压器、VGA、耳机接头、USB、开关、HDMI 等物料，其中振动盘为双层，节约空间，提高送料效率，可以根据客户不同需求，进行个性化定制。

The 209 Bowl Feeder is a feed device developed professionally for bulk incoming materials. This product can be used on insertion machines.. It can be used for plug-ins, terminals, small Transformers, VGA, headphone connectors, USB, switches, HDMI, etc.. Materials, Among them, the vibration disk is double layer, saves space, improves the feed efficiency, can be customized according to the different needs of customers. according to the customer's different needs.

极性识别震动盘供料器
Identify Polarity Vibrant Bowl Feeder

可自动区分 LED，电容极性并自动调整方向
Can automatically distinguish LED,
Capacitance polarity and automatic redirection



214

214 散料分极性供料器是专业针对散装 LED，电容来料开发的一款供料装置，该款产品可以自动区分 LED，电容极性并自动调整方向，具有高经济性、安全性高、稳定性高、通用性强等特点，可以根据客户不同需求，进行个性化定制。

The 214 Bowl Feeder is a feed device developed professionally for bulk LEDs and capacitors. This product can automatically distinguish LEDs, capacitive polarity and automatically adjust direction, with high economy, high security, high stability, strong versatility and other characteristics. Can be customized according to the customer's different needs.



BOWL FEEDER APPLICATION

规格 Specification		产品型号 Model						
		205	209	225	227	232	233	214
送料方式	Delivery Mode	震动 Vibrant						
送料时间	Opening Time	1.0 Sec/Pcs						
来料包装	Incoming Material	散装料 Bulk						
适用零件	Applicable Parts	接插件、端子、小型变压器、VGA、耳机接头、USB、HDMI 等。 Plugin, Terminal, Small Transformer, VGA, Headphone Connector, USB, Switch, HDMI, Etc..						
重量	Weight	约 120 Kg	约 150 Kg			约 160 Kg		
工作气压	Pressure	0.4PA 以上 0.4MPA The Above						
工作电压	Voltage	AC220V						
功率	Prower	200W						
切脚整形	Cut And Pre-Form	X	X	X	O	X	X	X
分料	Storing	X	X	O	X	X	X	X
盘数	Number Of Bowl	1	2	1	1	1	2	1
可使用来料种类	Available Fraction	1	2	1	1	2	4	1
分辨极性	Identify Polarity	X	X	X	X	X	X	O
适用机器	Applicable Machine	适用任一品牌插件机 For Any Brand Insertion Machines						
外形尺寸	Outline Dimension	900mm(L)X400mm(W)X1065mm(H)						
* “x” 代表无, “o” 代表有		* “X” stands for none, “O” stands for yes						
* 以上参数仅供参考, 请以机器实际性功能为准		* The above parameters are for reference only. Please refer to the actual function of the machine.						



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适用元件

Component Application

各种连接器、开关按钮、变压器、端口插座、电容器件等。

CONNECTOR, SWITCH, SOCKET, TRANSFORMER, COILS, PORTS, CAPACITORS, ETC

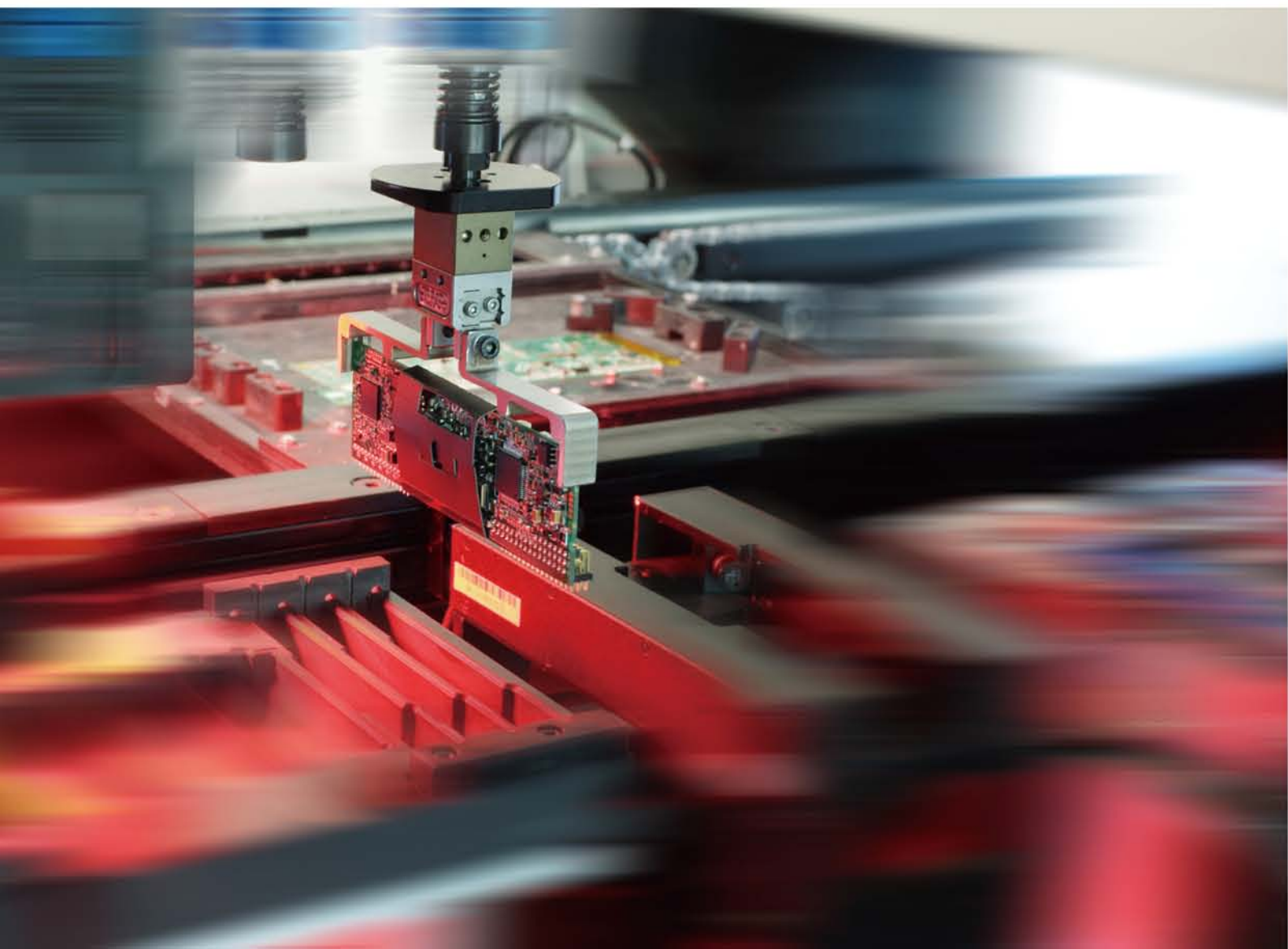


夹爪选型

Special Clamp Application

为了适应异形原件的多样性,根据不同零件外形,设计最适合的吸嘴和夹爪,为高速插件机提供保障。19年电子元件设备设计、制造及现场使用丰富经验,能最大程度保障零件的抓取、插入率。专业、可靠、放心才是你选择我们的理由。

We design nozzles and clamber to fit different odd components accoding to different shapes for easy replacement to secure high-speed inserting.



IC



电容
Capacitor



方块电容
Capacitor



晶体
Transistor



开关按钮
Tact Switch



三针端子
Connector



排插端子
Terminal



拨码开关
Switch



VGA



U 型电阻
U shaped Resistor



U 型电阻
U shaped Resistor



排针
Pin



USB



90° 折弯电容
Capacitor



电感夹爪
Inductor



连接器
Connector



电感线圈
Coil



大变压器
Transformer



超大电容
Capacitor



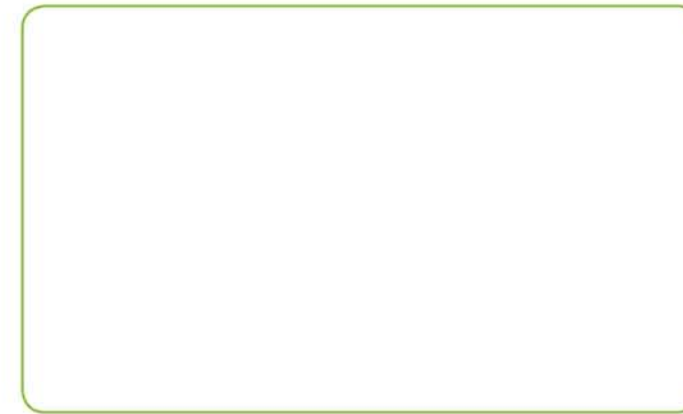
PCB 小板
Module



电感线圈
Coil

代理商 / 经销商

Agent/Dealer



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