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杰伟智能装备(东莞)有限公司  
DWELL THERMOFORMING MACHINERY CO., LTD.

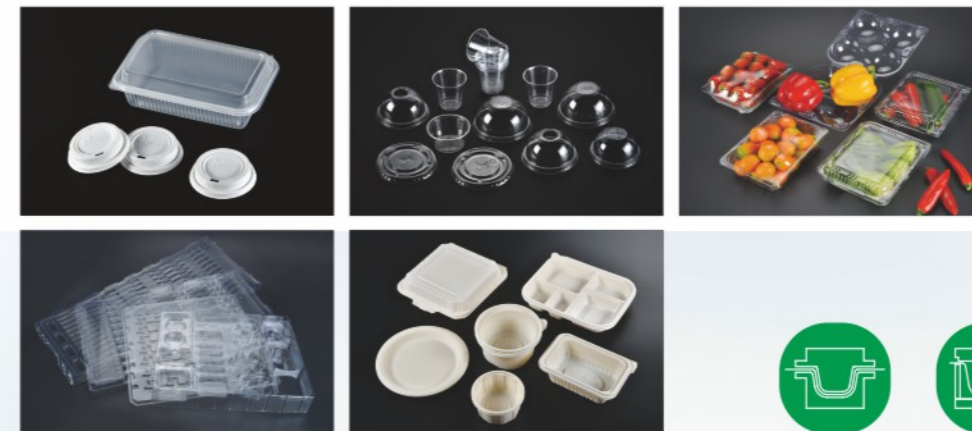
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**DWELL**<sup>®</sup>

## High-speed Full Automatic Thermoforming Equipment 高速全自动热成型设备



正负压成型  
Positive and negative  
pressure forming



中心冲槽孔  
Center  
punching hole



完整冲载  
Complete  
impact load



自动计数、堆叠  
Automatic counting  
and stacking



杰伟智能装备(东莞)有限公司  
DWELL THERMOFORMING MACHINERY CO., LTD.

本公司专业生产高速全自动热成型设备,具有性能好,操作简便,应用广等特点,主要用于PET.PP.PS.PE.PLA等片材的快速成型,以及食品、轻工、电子,玩具等塑料包装制品。

The company specializes in the production of high-speed full automatic thermoforming equipment, with good performance, easy operation, wide application and other characteristics, mainly used in the rapid forming of PET.PP.PS.PE.PLA sheet, as well as food, light industry, electronics, toys and other plastic packaging products.

# HP1110

高速全自动热成型设备  
High-speed Full Automatic Thermoforming Equipment





## HP1110 Automatic Thermoforming Equipment



### MACHINE FEATURES

#### 机器特点

- ◆ 机架是整体架构，经整体精密加工，刚性好，精度高，稳固性强，且各机构定位精准之特点。
- ◆ 模具最大成型面积宽1000mm，长1100mm，边料量少，成型面积大，产量高。
- ◆ 本机控制采用三菱PLC、或西门子PLC、触摸屏、伺服控制，位置精度： $\pm 0.02\text{mm}$ ，配方数据存储300套，电炉采用德国发热砖，可分二至三段加热，采用人机数控分区控温，控温精度： $\pm 1^\circ\text{C}$ 。
- ◆ The frame is an integral structure, which is characterized by good rigidity, high precision, strong stability and accurate positioning of each mechanism after overall precision processing.
- ◆ The maximum forming area of the mold is 1000mm wide and 1100mm long, with small amount of leftovers, large forming area and high output.
- ◆ Mitsubishi PLC, Or Siemens PLC, touch screen and servo control are adopted for the control of this machine. The position accuracy is  $\pm 0.02\text{mm}$ . The formula data is stored in 300 sets. The electric furnace is made of German heating bricks, which can be heated in two to three stages. The temperature is controlled by human-machine numerical control zones. The temperature control accuracy is  $\pm 1^\circ\text{C}$ .

### PARAMETERS

#### 技术参数

型号 Model	HP1110	
主机尺寸 Machine size (L*W*H)	7000*3000*3025mm	
成型最大面积 Maximum forming area (W*L)	1000*1100mm	
成型最小面积 Minimum forming area (W*L)	610*600 mm	
最宽片材 Widest sheet	1050mm	
最窄片材 Narrowest sheet	640mm	
拉伸尺寸 Stretch size	0~60mm	
合模力 Clamping force	450KN	
系统气压 System air pressure	6bar	
成型气压 Forming air pressure	2~4bar	
最快成型时间 Fastest forming time	3s	



## HP1110全自动热成型设备

# HP1110 Automatic Thermoforming Equipment

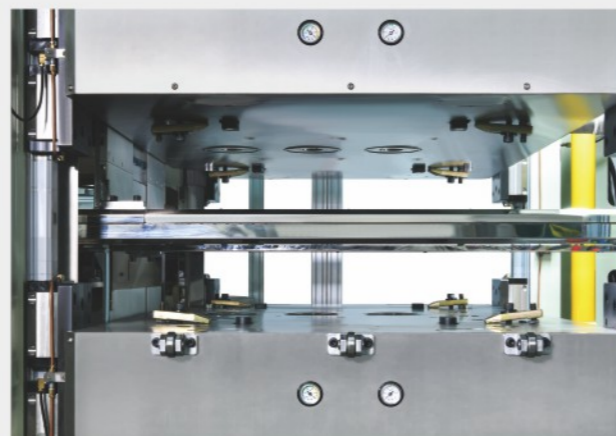
### 控制系统 Control system



控制系统为人工智能。操作控制箱采用专业制作铝合金吊箱式，控制系统采用三菱可编程控制器，研华15寸彩色工控机，由SSCNET III/Hi光纤通讯控制三菱伺服，定位快速精准。专业的操作画面与远程连机，解决了远程维护与程序升级问题，并具有强大的内存空间，设置包含：手动操作、自动操作、成型模式、运动参数、温度设定、报警记录、维护指引、配方数据储存和U盘备份，整套系统安全稳定，易操作。

The control system is artificial intelligence. The operation control cabinet is made of aluminum alloy hanging box. The control system uses Mitsubishi programmable controller, Advantech 15-inch color industrial computer, and Mitsubishi servo is controlled by SSCNET III/Hi optical fiber communication. The positioning is fast and accurate. The professional operation screen and remote connection solve the problem of remote maintenance and program upgrade, and have powerful memory space. The settings include: manual operation, automatic operation, forming mode, motion parameters, temperature setting, alarm record, maintenance guidance, formula data storage and USB flash disk backup. The whole system is safe, stable and easy to operate.

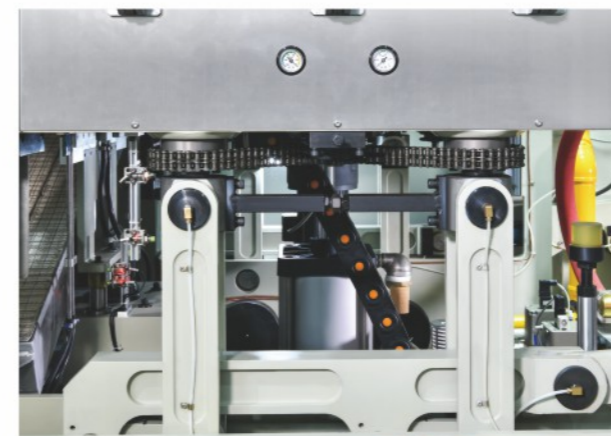
### 超大成型幅面 Supersize forming area



最大成型尺寸：宽1000mm，长1100mm，减少边料量，版面大，模具可以根据产品的选型做的更大，产品数量做的更多，产量做的更高。

Maximum forming size: width 1000mm, length 1100mm. can reduce the amount of edge section, with large forming area, so mold can be based on the selection of products to do bigger size, the number of products to do more, and do higher output.

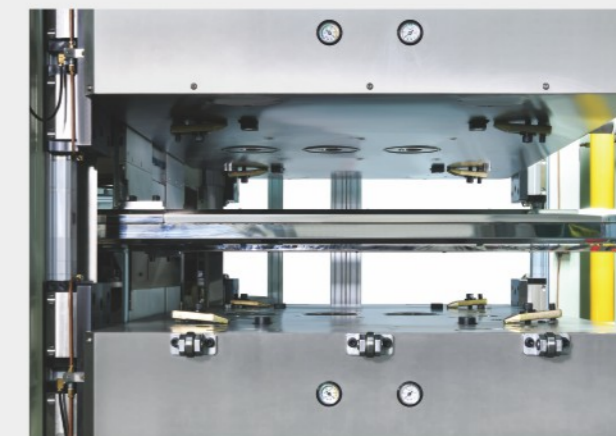
### 上/下模台调节 Upper/lower mold adjustment



上/下高度各可调节0~150mm，兼顾了多种规格模具高度，且精准到位。

The upper / lower mold height can be adjusted by 0~150mm respectively, taking into account the height of various specifications of mold, and is accurate.

### 锁模 Mold-Locking



上/下模定位后，快速气动锁紧，再用螺丝锁紧固定，具有双重安全保障，模具更换和拆卸更加简便快捷。

After the upper/lower mold is positioned, it can be quickly pneumatically locked, and then locked and fixed with screws, which has double safety guarantee, and the mold replacement and disassembly are more convenient and quick.



## HP1110全自动热成型设备

# HP1110 Automatic Thermoforming Equipment

### 上料机 Charging machine



上料机卷料托重可达800公斤，采用空心棒一锥套一锁紧圈，简单轻巧的装穿片结构。

设有片材缓存区，减轻拉片负载，并避免放料无规律和片材刮花现象，配备涂油装置，有利于产品脱模。轻松解决产品难脱模问题。

The weight of the coil carrier of the feeding machine can reach 800 kg. It adopts a hollow rod with a taper sleeve and a locking ring. It is a simple and lightweight structure for installing and threading sheet.

It is equipped with a sheet buffer area to reduce the pulling load and avoid irregular feeding and sheet scratching. It is equipped with an oiling device to facilitate product demoulding. Easily solve the problem of difficult demoulding of products.

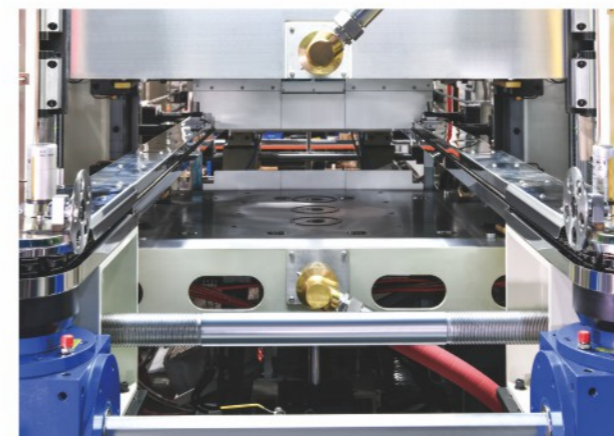
### 弹簧夹式链条 Spring clip chain



不伤片材，防止生产过程中产生塑料粉尘，适用于高品质制品，达到无尘车间生产标准。链轨可扩张0~60mm，选用片材宽向兼容性强；平行拉伸，使片材均衡伸展，边料少，约15mm左右，节省材料。

It does not damage the sheet and prevents plastic dust from being produced during production. It is suitable for high-quality products and meets the production standard of dust-free workshop. The chain rail can be expanded by 0~60mm, and the selected sheet has strong compatibility in wide direction; Parallel stretching can make the sheet stretch evenly, with less scrap, about 15mm, saving material.

### 链轨传动 Chain track drive



链轨主体设计为铝合金整体拉伸成型。通水不生锈，盖板由304不锈钢经激光精密加工而成。中板由国产优质45#钢精密加工并镀硬铬。加工对接精度高，摩擦系数低，使用寿命长。拉片采用夹片式链条，链夹片采用硅钢片制作，特别设计气缸张紧链条机构。拉片驱动采用三菱7.5kw伺服电机，防止链条松弛，拉片快速而且准确。

The main body of the chain rail is designed to be integrally stretched and formed of aluminum alloy. The cover plate is made of 304 stainless steel by laser precision processing. The medium plate is precisely processed by domestic high-quality 45 # steel and plated with hard chrome. High machining accuracy, low friction coefficient and long service life. The pull piece adopts clip type chain, and the chain clip is made of silicon steel sheet, and the cylinder tensioning chain mechanism is specially designed. Mitsubishi 7.5kw servo motor is used for pulling the tab to prevent the chain from loosening, and the pulling tab is fast and accurate.

### 电炉部分 Electric furnace



电炉配备德国高效节能陶瓷发热瓦，高频瓷接头，上下炉两段加热，电炉结构紧凑，由气缸驱动呈八字形张开，减小空间占用面积。炉区有隔热挡板机构，加热区片材长度范围可根据生产需求来进行调节。

The electric furnace is equipped with German high-efficiency energy-saving ceramic heating tile, high-frequency ceramic joint, upper and lower furnace two-stage heating, The electric furnace has a compact structure and is driven by a cylinder to open in a splay shape to reduce the space occupation area. The furnace area has an insulating baffle mechanism, and the length range of the heating zone sheet can be adjusted according to the production requirements.



## AP10 High-speed Thermoforming Punching Machine



### MACHINE FEATURES

#### 机器特点

- ◆ 高速冲床配合成型机体外联线自动裁切，频率与成型机配合使用，用压轮机构送料，以滚珠丝杠传动为主体，使整机动作自动化，精确化，高效化。
- ◆ 且具备待料自停功能，最快可达100-120次/分钟，具有产量大、冲切精度非常高的优势，配备落料斗，自动收集冲裁掉落碎片，大功率电机连减速机偏心轮传动，裁切力量大，四滑轨精密配合，强度高，裁切位精度高，快速换模设计，加快了换模时间，垂直裁切机构设计，五金裁切模具，完整冲裁，配备自动升降接叠产品，快速垂直推出产品至流水线，由流水线输送至包装位。
- ◆ PLC电脑集成控制系统，100组数据记忆功能，实现自动化程度更高。
- ◆ The high-speed punch is used in conjunction with the external line of the forming machine for automatic cutting, and the frequency is used in conjunction with the forming machine. The pressure wheel mechanism is used to feed the material, and the ball screw drive is used as the main body to make the whole machine move automatically, accurately and efficiently.
- ◆ It have the function of automatic stopping when waiting for materials, which can reach 100-120 times/minute at the fastest. It has the advantages of large output and very high punching accuracy. It is equipped with a blanking hopper, which automatically collects the blanking falling debris. The high-power motor is connected with the eccentric wheel drive of the reducer. It has a large cutting force. The four slide rails are precisely matched, with high strength, high cutting position accuracy, rapid die change design, accelerated die change time, vertical cutting mechanism design, hardware cutting mold, complete punching, Equipped with automatic lifting and stacking products, the product can be quickly and vertically pushed to the assembly line, and then transported to the packaging position by the assembly line.
- ◆ PLC computer integrated control system, 100 sets of data memory functions, achieving a higher degree of automation.

### PARAMETERS

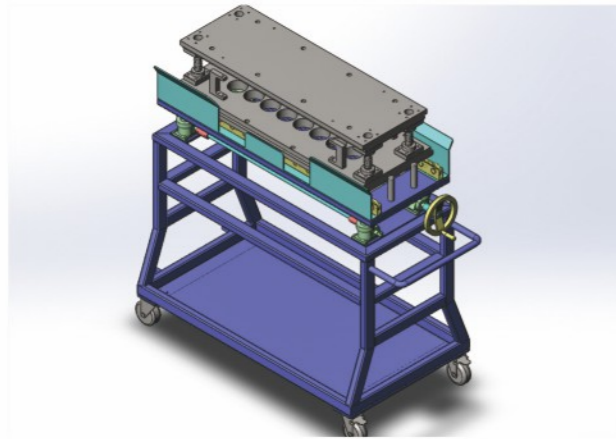
#### 技术参数

型号 Model	AP10	
机身尺寸 Machine size (L*W*H)	2500*2000*2900mm	
冲剪面积 Punching area (W*L)	1000*330mm	
最大材料宽度 Maximum material width (W*L)	1100mm	
最大成品高度 Maximum finished product height	150mm	
冲剪行程 Punching stroke	200mm	
空气气压 Air pressure	0.4-0.6Mpa	
最大冲剪速度 Maximum punching and speed	100-120回/分钟	
冲剪推力 Punching thrust	100KN	
最大冲剪力 Maximum impact force	15T	
额定冲剪力 Rated impact force	10T	



## AP10 High-speed Thermoforming Punching Machine

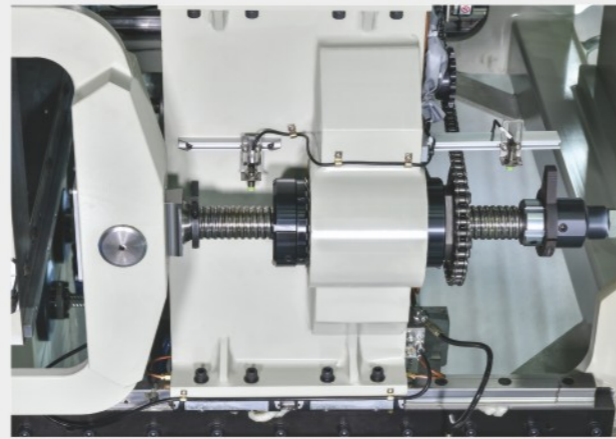
### 装模 Mold installation



设计有专用模具车，装模轻松便捷，模具推入定位后，油缸迅速锁模，减少更换模具的时间，更加安全可靠。

A special mold car is designed, which is easy and convenient to install the mold. After the mold is pushed into position, the oil cylinder locks the mold quickly, reducing the time to replace the mold, and making it more safe and reliable.

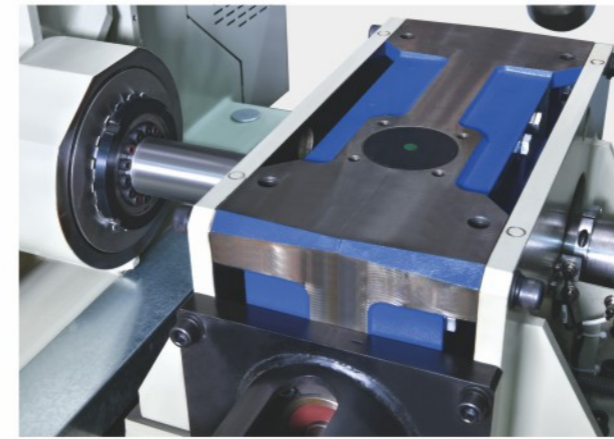
### 冲剪部分微调 Fine adjustment of punching and shearing part



以滚珠丝杠传动为主体，使整机微调动作自动化，精确，高效。

With ball screw drive as the main body, the fine adjustment of the whole machine is automatic, accurate and efficient.

### 偏心轮传动 Eccentric drive



大功率电机连接减速机偏心轮传动，裁切力量大，四滑轨精密配合，强度高，裁切位精度高。

The high-power motor is connected with the eccentric wheel drive of the reducer, and the cutting force is large. The four slide rails are precisely matched, with high strength and high cutting position accuracy.

### 升降计数输送机 Lifting counting conveyor



产品堆叠高度: 0-350mm，配备自动升降堆叠产品的结构设计，对轻小产品的堆叠也无忧，平稳堆叠并计数，快速水平推出产品至流水线，由流水线输送架送至包装的位置，有利于快速包装。

Stacking height of products: 0-350mm, equipped with the structure design of automatic lifting and stacking products, it also has no worries about the stacking of light and small products. It can stack and count the products smoothly, quickly and horizontally push the products to the assembly line, and send them to the packaging position by the assembly line conveyor rack, which is conducive to rapid packaging.



## AP10 High-speed Thermoforming Punching Machine



### 高精度大版面冲剪

### High precision large forming area punching

本机为配合成型机体外联线自动裁切，频率与成型机配合使用，且具备待料自停功能，具有产量大、冲切精度非常高的优势；水平裁切机构设计，五金裁切模具，完整冲裁，并配有4组压轮送片，再配备超长超薄产品导杆组，解决大版面密排版产品的难题，产品导杆用线性轴承作支座，手柄螺丝作紧固，使产品承托定位操作快捷。

This machine is used in conjunction with the external line of the forming machine for automatic cutting. The frequency is used in conjunction with the forming machine, and it has the function of automatic stopping when waiting for materials. It has the advantages of large output and very high punching accuracy; Horizontal cutting mechanism design, hardware cutting mold, complete blanking, and equipped with 4 sets of pressure wheel feeding, and then equipped with ultra-long and ultra-thin product guide rod group, to solve the problem of large-panel closely-set products. The product guide rod uses linear bearings as support, and the handle screws as fastening, so that the product support and positioning operation is fast.

