

# HAGMANN



## **SOLID CUTTING PRESS type 9149** 9149型封装机床

**for use in the clean room** 用于清洁无尘工作间

- for punching single blisters from a blister sheet 应用于单个封装泡壳的模切下料
- for punching a number of tear-off packs from one blister sheet 应用于多个封装泡壳的下料

## Machine design 设备的设计特点：

- Machine construction in conformity with CE standards. 该设备的制造符合CE标准
- Version designed for use in the clean room. 该型号设备可用于无尘清洁工作间
- Machine surfaces are easy to clean. All covers are of stainless plate steel having a "fine wet-ground 4N" surface quality. 设备表面易于清洁。所有设备表面均使用经过超细湿磨的磨光不锈钢板。
- Machine stand is powder-coated or 2-K coated. 床身经过喷粉处理，达到2-K涂层标准。
- Exhaust air is collected and conveyed out of the clean room by a hose. 工作废气被吸收并被软管排出室外。

## Uses of the SOLID CUTTING PRESS, Model 9149 9149模切设备的应用

Small blister packs can be deep-drawn a number of times on one blister sheet.

在一片吸塑包装材料上可以拉伸成多个小的吸塑泡壳。

The number of individual blisters on one blister sheet will differ according to the size of individual blisters.

一片吸塑包装原料上能裁出的独立包装个数取决于该泡壳的尺寸。

Example: it is possible for 1 to 200 units of blister packs to be deep-drawn on one blister sheet.

例如：一片吸塑包装原料上可以拉伸成型1-200个单元的小吸塑包装。

When packing small parts, efficiency will be achieved by filling one 30-unit blister sheet in advance with their products and sealing the 30 blister units with a single sealing lid.

当包装小零件时，需要先将零件装入30格吸塑泡壳中，然后使用一张衬材将这30格一次性封好，以此来保证效率。

After sealing, the individual packs are punched out at the SOLID CUTTING PRESS in one operation. The sealing lids fit the blisters without any displacement. A tear-off flap can be easily produced for the blister design concerned. You can seek

advice or request samples. 密封后，使用模切设备一次性将所需的独立包装模切出来。衬材与吸塑原料之间完美无缝隙压接。在包装设计时加入吸塑包装的易撕贴设计可以使其很方便地被生产出来。欢迎向我们咨询或申请样品。

Another approach to finding a solution is multiple tear-off packs. (Examples: 5-, 10-, 12- or 20-pack units, each can be torn off separately.) 另外一种解决方案是多重易撕包装，（例如：一张吸塑原料上做出5, 10, 12或20个可分别独立的易撕包装）。

The multiple tear-off packs can in turn be available as multiple units in one blister sheet.

与同一片吸塑原料上可以设计多个包装单元相同，多个多重易撕包装也可以安排在同一片吸塑原料上。

### Hint: (提示)

If the format of the sealing lid is A4 or A3, the sealing lids can be printed more cost effectively.

如果封装材料的规格是A4或A3大小，将使其在印刷环节大大提升效率。

## Description of the SOLID CUTTING PRESS, Model 9149 9149模切设备的细节规格

The machine is controlled by the Mitsubishi AL2 module, has CE-conformity, is of solid construction, can be operated ergonomically, can be converted to accommodate various punching tools and is therefore suited to ongoing and large-scale output. Thanks to these characteristics, the SOLID CUTTING PRESS holds its value. 机床使用三菱AL2模块进行操控，并已通过CE认证，床身结构坚固，操作过程符合人体工程学，并适用于兼容多种冲压工具，从而保证大批量生产。

The steel-strip punching tools can be produced **cost effectively**. 钢制冲压工具可以被高效地制造出来。

The punching tools can be kept conveniently in both toolboxes. 冲压工具可以方便地放置于两个工具箱内。

Applying the horizontal punching procedure enables **precise** punching of the sealing edges of the deep-drawn section. This is advantageous for qualified packages, as the tear-off force of the sealing lids is **more consistent**.

使用水平模切步骤使得拉伸成型的封装边缘更加精准。并极大地提高衬材的牢固度，这对高标准封装来说是一个优势。

Example: Many blister manufacturers specify a punching tolerance of +/- 0.7 mm. Then the edge of the deep-drawn section is shifted up to 0.7 mm. In order to achieve the required type of sealing surface, the outer profile of the blister must be extended by this size. Asymmetrical edges give the sealed blisters a poor appearance, and so repeatedly raises the question as to how this situation can be improved. 例如：许多吸塑包装生产商将模切公差定在±0.7mm，因此拉伸成型形成的边缘也就长了0.7mm。为了达到所需求的封装表面形状，吸塑包装的外沿形状必须以此尺寸为基准相应扩大。不对称的外缘会影响吸塑包装的外观，并使得如何避免此类情况发生的问题被反复提及。

The solution lies in the vertical punching method, where the punching tools have a blister-centring facility. In most cases this achieves an accuracy of +/- 0.2 mm of the nominal dimension. 解决问题的方法就在于垂直模切上，这里的模切工具配有一个泡壳中心校准装置，在大多数情况下，这个装置可以达到名义尺寸的±0.2mm的精确度。

Easy punching is possible thanks to convenient and simple machine operation. 方便简单的机器操作方法使得简便的模切工作变成可能。

Even greater operational streamlining can be achieved using the **automatically shifting punching plate**. 甚至在操作上进行更大的简化也可通过使用可自动替换的模切模板来进行。

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Fine adjustment of the height of the punching table is to enable precise adjustment of the punching tool inserted at the time. 对模切工作台高度的微调使得装入冲压工具时对其进行精确校准变得可行。  
Whenever tools are changed, it is worthwhile making this fine adjustment. The punched cut should be set with sufficient force as necessary. 无论何时更换工具，这种微调都是必要的，且务必保证调整后的模切力充足，符合要求。  
The sign of an ideal punching cut is a clean punched edge of the blister and as soft a punched impression as possible on the punching plate. 评判最优冲压效果的标准包括：冲压出干净整齐的吸塑泡壳断面以及在模切模板留下尽可能轻的压痕。  
If the impression made in the punching plate is too deep, then both the plate and the punching knife will be subjected to considerable wear. 如果模切模板上的压痕过深，那么需要考虑模切模板和模切刀刃是否磨损。  
The carriage moves on bearing-mounted PUR castors, resulting in very fine and virtually noise-free running. 模切台面装在有轴承的滑轨上运行，这会带来非常细腻且几乎无噪音的运行效果。  
The punching cycle is triggered automatically as soon as the carriage is inserted. 整个模切循环将在模切台面进入床身后被自动启动。  
After the punching process, the sliding carriage is automatically ejected by approx. 10 cm. 模切过程结束后，带滑轨的箱体自动弹出10cm左右。  
Fine adjustment of punching-table height: the height of the punching table can be set using the hand wheel so that the steel-strip tool can be inserted without causing damage, with a minimum of punching particles resulting. 模切台面高度的微调：模切台面的告诉可以使用手轮调整，以便装入钢制模具时模具不会被损伤，安装模具时间更小。  
The two tool boxes provide storage for punching tools and machine accessories. 机床的两个工具箱可以用来存放冲压工具和机床附件。

#### **Operation:** 操作：

Switch on machine and compressed air. 开启机床与压缩空气开关  
Wait for the start-up time of the controller, approx. 15 seconds. 等待大约15秒至控制器完全启动  
Place the blister sheet on the punching tool. 将吸塑泡壳原料放在冲压工具上  
Use the sliding carriage to move this as far as the rear stop. 用滑轨将模切台面推到最里面位置  
Machine activates punching process automatically. 机床自启动模切  
Pull carriage back, remove punched blister. 将模切台面拉出，拿出压好的吸塑泡壳  
Put punching remnants into refuse drawer. 将废料放入废料箱

#### **Steel-strip punching tools:** 钢带模切工具：

The steel-strip punching tools are suitable for punching single blisters from a multiple blister. 钢带模切工具适用于在一张吸塑原料上逐个模切独立的泡壳。  
Steel-strip punching tools can be produced that punch and perforate simultaneously. 钢带模切工具可同时进行模切和打孔。  
The cost-effective steel-strip punching tools can be produced in a short space of time. 高效的钢带模切工具在很短的时间内即可生产出来。

#### **Automatically shifting punching plate** 自动替换的模切模板：

Using the automatically shifting punching plate simplifies the process. The punching plate need no longer be laid on and removed. The punching plate is fitted so that after every punching stroke an electromotor powers two eccentric cams, thus shifting the punching plate a little. 使用可自动替换的模切模板可使生产过程简单化，模切模板不用被反复安装或取离。在这里它是固定的，每一下模切结束后，电机会驱动两个电子凸轮，由此将模切模板的位置稍微改变。  
Consequently, punching is performed at another point with each punching stroke, and the punching plate is handled with the same degree of care as when it is laid on manually. 因此，每一次模切都在模板运行到行程的底部进行，模切模板也就像手动包装时一样会得到同等程度的小心使用。  
Because the punching plate is **not** laid on and removed, greater rationalization of the process is possible. 因为此处模切模板不能随便放入和移动，只有合理的工艺才能使得更加合理化的生产过程变成可能。

## **Technical data of the SOLID CUTTING PRESS Type 9149** 9149型模切机的技术参数

<b>Typ 9149</b> 9149型	for die-cutting of single blisters from a blister sheet or multiple tear off packs out of one blister sheet 是从吸塑泡壳整片封装板上模切出单个或多个泡壳的机床
<b>Control</b> 控制器	Mitsubishi AL2 三菱AL2控制器
<b>Operation</b> 操作	conventional machine operation 普通机床操作
<b>Dimensions</b> 规格尺寸	Width: approx. 1075 mm, depth: approx. 1060 mm, height: approx. 1894 mm 宽 进深 高
<b>Weight</b> 重量	approx. 1210 kg
<b>Die-cutting surface</b>	550 x 350 mm 可模切整板面积
<b>Die-cutting range</b>	approx. 15 mm 每次模切大约范围
<b>Specific adjustment of die-cutting height</b>	模切模具可调整高度 approx. 10 mm
<b>Die-cutting power</b>	approximately 550 kN at a distance of 1 mm above the stamping tool. 刀具刃口上1mm处的模切力约550牛顿
<b>Blister depth</b> 泡壳深度	max. 100 mm
<b>Output</b> 产量	approx. 8 cycles/minute, without loading the blister sheet and unloading of the blisters 大约每分钟8个循环，不包括上下料时间
<b>Operating pressure</b> 工作压力	0,60 - 1,0 MPa (6,0 - 10 bar)
<b>Compressed air</b> 压力空气 <b>conditioning</b> (supplied by customer)	in accordance with DIN ISO 8573-1, quality class: solid matters 5, water dew point 4, max. oil content 2 根据DIN ISO 8573-1标准，品质等级：固体颗粒等级5，含水量等级4，最大油含量等级2
<b>Compressed air hose</b> 压缩空气软管规格	outside-Ø 14mm, inside-Ø 11 mm
<b>Outgoing air hose</b> 排气软管规格	outside -Ø 14mm, inside -Ø 11mm
<b>Air consumption</b> 压力空气消耗	The consumption is at approx. 25 NL / cycle
<b>Ambient temperature</b> 室温	in operation +5°C up to +40°C
<b>Relative air humidity</b>	30% - 95% (no condensation) 相对湿度要求
<b>Command wire for the option suction device for particle</b>	吸出废料气体的主令线2条，必须引出无尘净化车间 2-core, must be guided out of the clean room.
<b>Electrical connection</b> 用电参数	230V / 50 Hz
<b>Tools</b> 工具	Strip steel punching tool 钢带模切工具
<b>Die-cutting tool height</b> 模切工具高度	Standardized die-cutting knife of 30 up to 100mm, every 10mm. 标准模切刀30-100mm
<b>Adapter plates</b> 调整板	Adapted to the height of the die-cutting knives. 调整模切刀的高度
<b>Tool changing time</b> 换刀时间	depending on the tool approx. 1 Min. 取决于模切工具，大约1分钟
<b>Warranty</b> 质保	2 years, on machine and options, in single layer operation complying with the annual maintenance by Hagmann Maschinenbau AG. Exceptions are cutting tools, wearing material, shipping/ travel expenses and labour. 在按照哈格曼公司的要求进行年度维护的情况下，机床和选配件的质保期为两年。但是模切工具、耗材、运费、差旅费以及工时费不包括在内。

Subject to technical modifications

