

## 清洗方式对比 Way contrast

	HENC-24	超声波清洗 Ultra-sonic cleaning	注液+吹气 Inject liquor+air blowing	细针插 Fine needle poke
清洗效果 Cleaning result	◎	△	△	△
清洗液 Cleaning liquid	工业纯净水 Industrial purify water	化学溶液 Chemical liquor	化学溶液 Chemical liquor	无 No
气味 Smell	无 No	有 Yes	有 Yes	无 No
作业环境 Operational environment	◎	X	X	X
环境对策 Environmental countermeasure	◎	X	X	◎
细小吸嘴 Tiny Suction Nozzle	◎	X	X	X
黑色涂层 Black Coating layer	保护 protected	无 W/O	△	△
反光板 Reflection plate	保护 protected	无 W/O	△	△
二维码 Two-dimension code	保护 protected	无 W/O	△	△
清洗品质 Cleaning Quality	有保证 With guarantee	无保证 w/o guarantee	无保证 w/o guarantee	无保证 w/o guarantee

注 Remark: ◎: 优 Excellent    △ : 一般 Normal    X : 差 Bad

## 新锐历代清洗产品 The product

NCM-II

NCM-II(2)

HENC-12

HENC-24



## Micro Scope A10

- 清洗后确认吸嘴状态是非常重要的工作。
- 本公司显微镜从吸嘴后方打开背光灯能够清楚地观察吸嘴内部的堵塞情况。(附带可调背光灯装置)
- 通过直接安装清洗用吸嘴托架，能够容易的进行检查。

A check on the condition of nozzles is a very important work after the nozzles are washed. Singrain's microscope is provided with a backlight unit as a standard accessory that is applied behind the nozzles to inspect the clogging of the nozzles infallibly. A washing nozzle holder can be mounted simply ease of inspection.

## 显微镜 A10



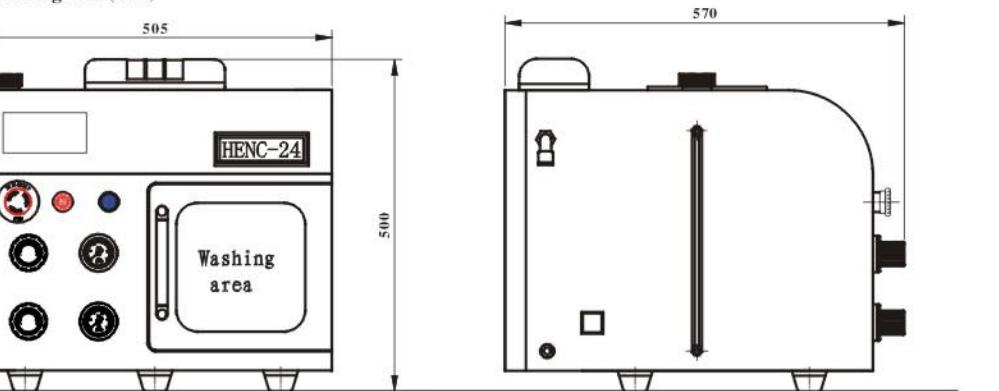
特制背光灯，可调节背光亮度，独特的机械定位卡座设计，方便定位，减少了繁锁的手动定位操作。  
Special backlight lamp, the brightness can be adjusted, the unique mechanicalpositioning clamping seat design, convenient location, reduce the cumbersome manual operation of positioning.

## 规 格 Specifications

设备名称 Name	NCM-II	HENC-12	HENC-24
设备重量 Weight of equipment kg	60	65	70
设备尺寸 Dimensions(MM) 长*宽*高 L×W×H	630×520×475	505×495×805	505×570×500
清洗液 Cleaning fluid	工业纯净水 De-ionised water		
消耗量 Consumed volume	≤130cc/h	≤200cc/h	≤400cc/h
气源 Gas source	压缩空气 Compressed air		
使用流体 Operating fluid		0.5~0.6Mpa	
喷射压力 Jet pressure		≤0.4Mpa	
空气消耗量 Consumed air volume	150NL/min.or less	180NL/min.or less	280NL/min.or less
电源 Power	110~240v		
额定电力消耗 Nominal power consumption	≤40w	≤200w	≤200w
喷嘴数量 Number of spray-head	4	12	24
对象吸嘴 Applicable nozzles	贴装吸嘴 Mounting nozzles	01005~2125 (Inch)	

注: 参数若有更改, 恕不另行通知! If data variant, not specify notice!

## 尺寸图(mm) Dimension diagrams(mm)



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Automatic Nozzle Washing Machine HENC-24  
自动吸嘴清洗机



24支吸嘴同时清洗, 效率绝佳

先进的射流技术, 无损吸嘴的清洗方式

SINGRAIN AUTOMATION EQUIPMENT CO., LTD

**HENC-24**吸嘴清洗机，全新高压射流清洗技术。高效、快速的清洗方式，让吸嘴保存最佳清洁状态，提高贴片效率！

Now introducing the HENC-24,a new nozzle washing machine with High pressure water jettechnology that achieves higher efficiency washing.

It can make suction nozzlesave the best cleaning state that Improve SMT efficieccy.



#### 技术原理 Technology principle

#### 高压射流技术 High Pressure Water Jet Technology

细微的水雾颗粒  
连续加压将水破碎，产生约0.03um颗粒的水雾，使之能清洗到细小的吸嘴孔径内壁的污垢。

Tiny water mist particle  
Press it continuously to fragment water in order to produce water mist particle approximately 0.03um , which can clean the dirt in the aperture wall of a small nozzle.



同时清洗24个吸嘴  
24 nozzles simultaneous



脉冲式动能场  
以音速 ( $V=360m/s$ )形成强大的脉冲式动能喷射到吸嘴上，在待清洗的吸嘴上方形成一个持续的能量场，粉碎表面和内部的污垢，达到之清洗目的。

Pulse kinetic energy field  
A strong pulse kinetic energy formed at sonic velocity ( $V=360m/s$ ) is sprayed on the suction nozzle so that a continuous energy field comes into being above the suction nozzle to be cleaned and smash the surface and internal dirt to achieve the cleanout purpose.

#### 选择HENC-24的理由 The reason of choice

#### 吸嘴沾污后… After the suction nozzle is splotchy...

吸嘴沾上锡膏和助剂  
将引起异常  
The adsorbing solder paste and auxiliaries in the suction nozzle may cause abnormality

贴装精度降低  
mounting accuracy decreases

- 脱落芯片增加  
Falling-off chips increase
- 芯片吸附时滑动  
Chips slide during its adsorption
- 吸嘴带回芯片  
Suction nozzle leads back chips

减少生产数量  
reduce production quantity

- 校正电路板增加  
Calibration PCB increases
- 废弃吸嘴增多  
Discarded suction nozzle increases
- 因贴片机停机导致生产线停转  
Production line stops due to the shut down of mounting machine.

增加损失  
loss increases

#### 引入新锐吸嘴清洗机后… After Singrain's suction nozzle cleaning machine is introduced...

提高贴片品质  
Increase SMT quality

- 提高了贴片机的吸附力和贴装率，实现了贴装品质的提升。

削减人工费用  
reduce labor cost

- 减少电路板的校正次数。
- 与之前相比可用更短的时间清洗吸嘴。

降低零部件成本  
reduce labor cost

- 减少脱落芯片。
- 全自动清洗，保证清洁度，减少吸嘴报废常待机时间。

提高生产能力  
increase productivity

- 缩短生产线保养时间
- 减少因吸嘴原因导致异常停机时间。
- 可生产更多产品

#### 解决问题 Solve problems

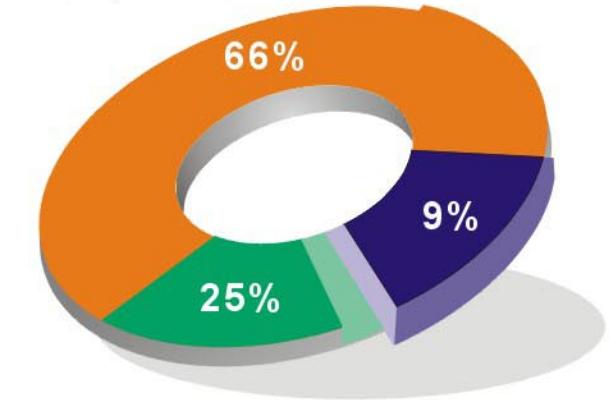
#### 为客户创造出更大的利润 Create more profits for customers

#### 传统清洗方式五宗“罪” Five “sins” of traditional cleaning mode

- 1 传统的清洗方式很难将吸附于吸嘴孔内部的焊锡、焊剂等完全除掉  
It is very difficult to completely remove off the solder, flux etc. absorbed inside the suction nozzle hole by using traditional cleaning mode.
- 2 重要的黑色涂层可能会因清洗而剥离  
Black key coating may be stripped off due to cleaning
- 3 可能会给反射板·二维码造成不良影响(脱落或渗入清洗液)  
It may give adverse impact on the reflection plate and the two-dimension code (fall off or penetrate the cleaning liquid)
- 4 一般情况下使用的清洗液IPA对环境是有害的  
A normally-used cleaning liquid IPA is harmful to environment.
- 5 难于控制清洗频率和清洗时间，对清洗结果无法检测  
It is difficult to control the cleaning frequency and cleaning time, and the cleaning result can't be detected

吸嘴清洗机以外的清洗事例  
Cleaning examples except suction nozzle cleaning machine  
(根据行业问卷调查获得)  
(Obtained from industrial questionnaire survey)

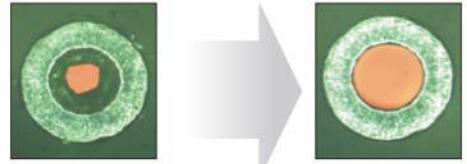
- 超声波清洁 Ultrasonic cleaning
- 手工清洁 Manual cleaning
- 水雾射流方式清洁 Water mist jet cleaning



#### 清洗效果 Cleaning effect

在贴装过程中，吸嘴特别容易沾附锡膏和脏物等。长时间不做保养，或者保养时清洗不彻底，锡膏及脏物便会硬化，增加清洗难度，甚至长时间累计后导致堵死，造成报废。

In the process of SMT, the suction nozzle is quite easily adhered with solder paste or dirt etc. If maintenance has not been done for a long time or the cleaning is not thorough enough while maintaining it, the paste and dirt will be hardened so as to increase the difficulty of cleaning, even it will result in blockage and scraps after long-time accumulation.



在实践中证明，HENC-24清洗机能有效的应对顽固的脏物，及对复杂结构的吸嘴进行彻底清洗。

It practically proves that the HENC-24 cleaning machine can effectively deal with inflexible solder paste and thoroughly clean the suction nozzle with complex structure.



与SMT工作人员交流并实践，综合实际情况，大概得出以上数据，供参考  
The above data are mainly obtained from the exchanging and practicing with SMT staff and the integration of actual situation and are for reference only.