

## 基本参数 COMMON SPECIFICATIONS



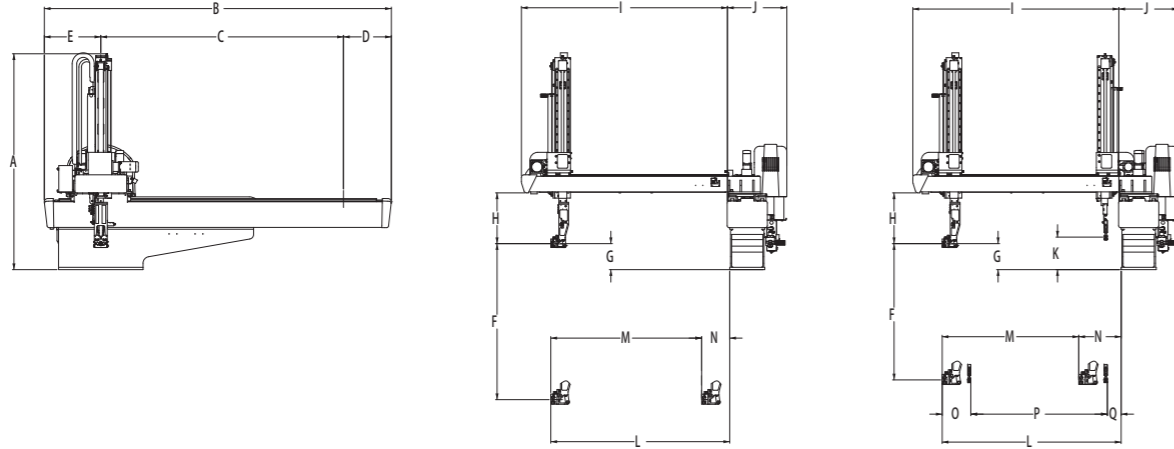
| 电源<br>Power                   | 使用空气压力<br>Air Pressure | 驱动方式<br>Drive System     | 姿势(气缸)<br>Posture<br>(Air Cylinder) | 气缸推力(压力为0.49MPa时)<br>Air Cylinder Driving Force(Air Pressure at 0.49MPa)                          |                        | 控制箱<br>Control Box |
|-------------------------------|------------------------|--------------------------|-------------------------------------|---|------------------------|--------------------|
|                               |                        |                          |                                     | 最大可搬重量(含夹具重量)<br>Max. Load(Incl Chuck Weight)   | 姿势力矩<br>Posture Torque |                    |
| AC200V±10%<br>(50/60Hz)<br>单相 | 0.49Mpa                | AC伺服马达<br>AC Servo Motor | 90°固定<br>90°Fixed                   | 10kg(据参数的设定,最大可搬重量可能超过10kg)<br>(As per setting of parameter,max.load may be over 10kg)<br>(15 kg) | 57.7N.m                | STEC-NA2           |

## 综合参数 GENERAL SPECIFICATIONS

| 机种<br>Mode | 行程(移动量)(mm)Stroke |                          |  |                  | 电源设备容量<br>(KVA)      | 最大消费电力<br>(KW)        | 总重量(kg)<br>Net Weight |                | 空气消费量<br>(NL/周期)              | 往返精度(mm)<br>Accuracy of<br>Movement |
|------------|-------------------|--------------------------|--|------------------|----------------------|-----------------------|-----------------------|----------------|-------------------------------|-------------------------------------|
|            | Ⓔ上下Vertical       | Ⓕ上下Vertical              | 前后Crosswise  | 行走Traverse       | Electric Consumption | Max Power Consumption | 本体<br>Main Body       | 操作盒<br>Pendant | Air Consumption<br>(NL/cycle) |                                     |
| eSW-1200   | 1200<br>(1400)    | —                        | Ⓔ 198~1378<br>Ⓕ (198~1578)                               | 1800<br>(1600)   | 3.8                  | 2.0                   | 592                   | —              | 18.06                         | ±0.1                                |
| eSW-1200s  | (1700)            | 1250<br>(1450)<br>(1750) | Ⓔ 368~1378<br>Ⓕ 108~1118<br>Ⓖ (368~1578)<br>Ⓗ (108~1318) | (2000)<br>(2200) | 5.4                  | 2.8                   | 636                   | 1.1            | 26.94                         |                                     |

★ 将行走行程为1800及2200mm行程的行走体向取出侧移动200mm时,行走行程将变为1600及2000mm。  
Make the traverse as 1800 and 2200mm moving forward to extracting side as 200mm, it will be 1600 and 2000mm

★ 本体重量中包含控制箱及电缆线的重量。  
Net weight includes the weight of control box and cable.



| 外形尺寸 (mm)      |   | eSW-1200  | eSW-1200s                 |
|----------------|---|---|---------------------------|
| A 全高           | Overall height                              | 1670(1770* <sup>1</sup> /1920* <sup>2</sup> )                     |                           |
| B 全幅           | Overall width                               | 2670(2670* <sup>5</sup> /3070* <sup>6</sup> /3070* <sup>7</sup> ) |                           |
| C 行走行程         | Traverse stroke                             | 1800(1600* <sup>5</sup> /2200* <sup>6</sup> /2000* <sup>7</sup> ) |                           |
| D 落下侧突出位置      | Overhang, release side                      | 435   |                           |
| E 取出侧突出位置      | Overhang, extract side                      | 435(635* <sup>5</sup> /435* <sup>6</sup> /635* <sup>7</sup> )     |                           |
| F Ⓔ 制品侧上下行程    | Ⓔ Vertical stroke                           | 1200(1400* <sup>1</sup> /1700* <sup>2</sup> )                     |                           |
| G Ⓕ 制品侧上下待机位置  | Ⓕ Vertical standby                          | 200   |                           |
| H 夹具安装位置上方有效尺寸 | Bottom of crosswise to chuck mount position | 385   |                           |
| I 前后单元         | Crosswise arm                               | 1585(1785* <sup>8</sup> )   |                           |
| J 本体厚度         | Thickness                                   | 455   |                           |
| K Ⓖ 水口侧上下待机位置  | Ⓖ Vertical standby                          | —   | 250                       |
| L Ⓔ 制品前进MAX    | Ⓔ Crosswise reach max                       | 1378(1578* <sup>8</sup> )   |                           |
| M Ⓔ 制品前进行程MAX  | Ⓔ Crosswise stroke max                      | 1180(1380* <sup>8</sup> )   | 1010(1210* <sup>8</sup> ) |
| N Ⓔ 制品前后待机MIN  | Ⓔ Crosswise standby min                     | 198   | 368                       |
| O Ⓔ Ⓕ 接近MIN    | Ⓔ Ⓕ Proximity min                           | —   | 260                       |
| P Ⓔ 水口侧前进行程MAX | Ⓔ Crosswise stroke max                      | —   | 1010(1210* <sup>8</sup> ) |
| Q Ⓔ 水口侧前后待机MIN | Ⓔ Crosswise standby min                     | —   | 108                       |

Ⓔ ( ) 尺寸表示选项行程。  
Ⓔ 表示制品侧行程。  
Ⓕ 表示水口侧行程。  
Ⓖ 表示水口侧厚度为20mm。  
Ⓔ 姿势部厚度为137mm, 但是不含气管的厚度。  
Ⓔ 水口侧上下行程比制品侧长50mm。  
\*1表示制品上下行程为1400mm时的尺寸。  
\*2表示制品上下行程为1700mm时的尺寸。  
\*3表示水口侧上下行程为1450mm。  
\*4表示水口侧上下行程为1750mm。  
\*5表示横行走行程为1600mm时的尺寸。  
\*6表示横行走行程为2200mm时的尺寸。  
\*7表示横行走行程为2000mm时的尺寸。  
\*8表示制品前进MAX为1500mm时的尺寸。

Ⓔ Figure in ( ) shows option stroke.  
Ⓔ stands for product side arm.  
Ⓕ stands for runner side arm.  
Ⓖ Thickness of runner chuck is basically about 20mm.  
Ⓔ Thickness of posture area is basically about 137mm (depends on tubing).  
Ⓔ Runner side vertical stroke is 50mm longer than that of product side.  
\*1 for product side vertical stroke 1400mm.  
\*2 for product side vertical stroke 1700mm.  
\*3 for runner side vertical stroke 1450mm.  
\*4 for runner side vertical stroke 1750mm.  
\*5 for traverse stroke 1600mm.  
\*6 for traverse stroke 2200mm.  
\*7 for traverse stroke 2000mm.  
\*8 for product side crosswise advance max 1500mm.

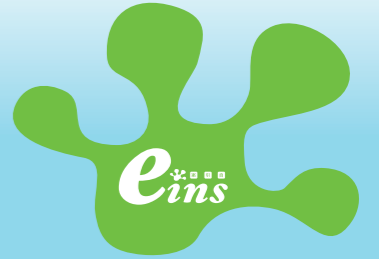
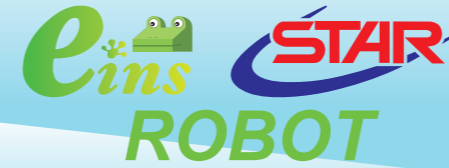
★ 因改良的原因,规格及外观有所改变时,恕不另行通知。All stated here is subject to change without advance notice.

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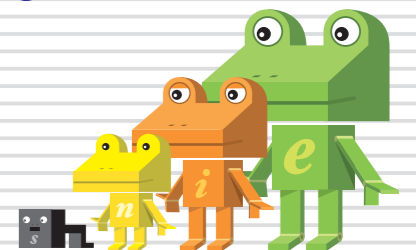
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2012年07月版



eSW-1200  
eSW-1200s

5/3轴AC伺服马达驱动机械手  
5/3 Axes Ac Servo motor driving Robot



# eSW-1200 eSW-1200s

适用注塑机: 350ton~850ton  
Injection Press Range 350ton~850ton



## STEC-NA2

装载7.5英寸的彩色液晶触摸屏,  
高操作性的操作盒型控制器  
Color LCD touch screen with 7.5 inches,  
High Operational controller

水口夹带直接感应开关, 省去了调整作业, 夹头部位打开量大, 直径较大的水口也可夹取。

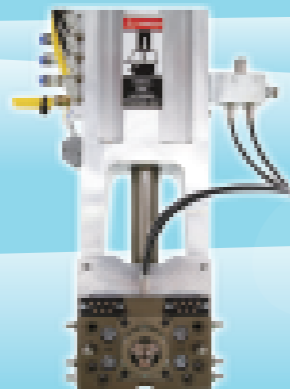
Sprue chuck with direct sensor switch, Save the time of regulating. The head of chuck is always open. Sprue with bigger diameter also can clamp

高刚性线性导轨, 机器能更加稳定顺畅运作。  
High rigidity & linear Guide. The robot can operate stably and smoothly.

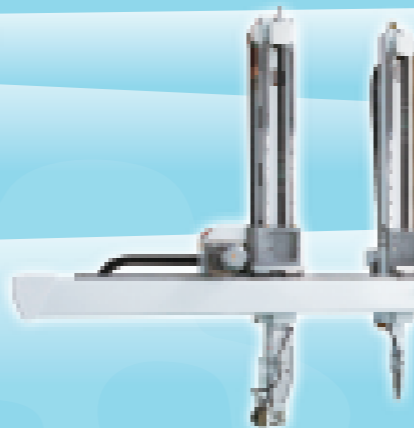
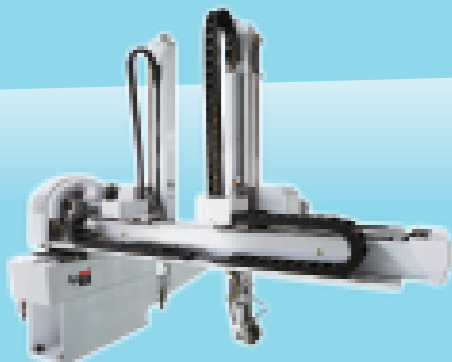


采用链接式拖链, 方便交换  
Use linking chain, easy to exchange

手动按钮  
Manual Button



姿势部加装了夹具快速交换金具, 方便夹具交换。  
省去了以前的配管与配线作业, 按手动按钮便可简单地交换夹具!  
Adding the jig of quick chuck change to posture unit, easy to exchange the chuck.  
Saving the time of assembling the pipe and wire as before.  
Now it can exchange the chuck easily to use the manual button



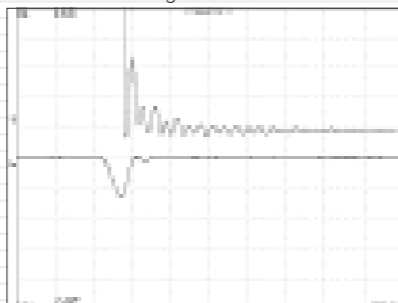
## 控振控制 Vibration Control

因如图所示的控振控制系统的追加, 机器的振动比敝公司以前的机器 **减少了50%以上**, 使机器能更加顺畅地运作。

Shown as adding vibration control system. The vibration of robot is reduced by more than 50%. It can make the robot operate smoothly.

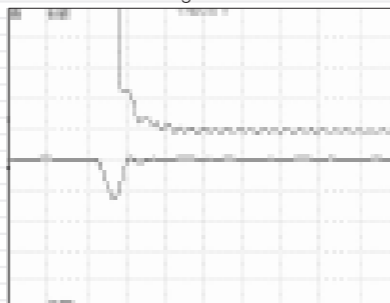
无控振控制时的振动波形图:

Vibration wave-diagram as non-vibration control



有控振控制时的振动波形图:

Vibration wave-diagram as vibration control

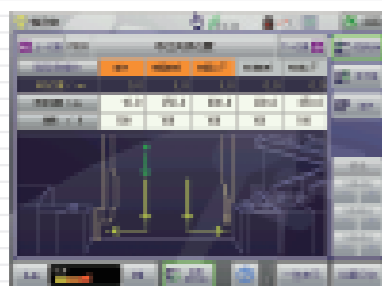


## STEC-NA2操作盒的特点 Feature of pendant

### ★ 装载7.5英寸的彩色液晶触摸屏

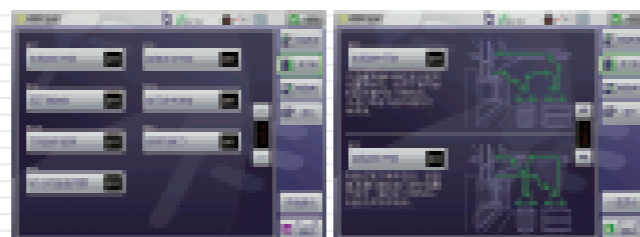
Color LCD touch screen with 7.5 inches

直观的图片, 图解便于操作, 大画面能显示更多信息。  
Intuitive picture, specification is easy to operate. Big picture can show more information.



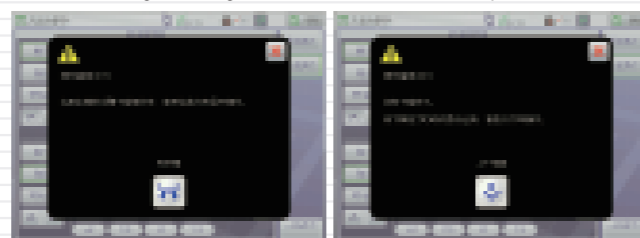
### ★ 触摸屏 /Touch Screen

省去了繁琐的光标移动, 可直接按目的按钮进行画面切换及设定。  
Saving the time of moving cursor. It can exchange and set the screen aimed to the button



### ★ 报警解决方法提示 /Solution clue on alarming

机械手报警等不运转时, 显示报警内容的同时, 提示解决方法。  
Robot is not running or alarming, the contents of alarm is shown and pointed to solution.

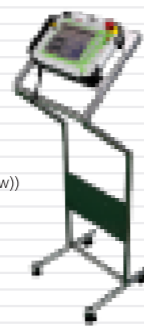


### ★ 3国语言切换 /Three languages exchange

可3国语言切换(可进行英文、日文、简体中文的切换)  
Three languages exchange(English, Japanese and Chinese(new))  
可直接在画面上简单地进行显示语言的切换。  
Exchange the language simply on the screen

### ★ 操作盒支架 /Pendant Stand

将操作盒安放到支架上, 更方便操作。  
Put the pendant on the stand and operate conveniently



(选项功能/Option)

## 绝对式马达 Absolute motor

★ 短暂停顿或机器停止时, 因各轴的位置已记忆, 机器再次运转时, 不需要用原点复归来确定各轴的位置, 可直接恢复自动运转。  
When it paused or stopped, the robot will work again. It is unnecessary to use start return to confirm the location of every axis due to it memorized. It can work automatically.

## 标准功能 Standard Function

- ★ 装箱动作(各轴256点) /Packaging Motion(Max.256 points)
- ★ 自由装箱点(115点 × 2处) /Free Packaging Motion (115points X 2stage)
- ★ 取出侧及前进侧姿势控制 /Crosswise Product Extract Side Posture Control
- ★ 走行途中姿势 /Posture Control During Traverse
- ★ 落下侧下降途中姿势 /Posture Midway descent at release side
- ★ 顶针连动 /Ejector Link
- ★ 不良品排出回路 /Defective product reject circuit
- ★ 初期不良品排出回路 /Initial defective product reject circuit
- ★ 取出下降待机 /Delayed arm Descent
- ★ 水口途中落下(走行, 复归) /Midway Runner Release (Move, Revert)
- ★ 水口模内开放 /Runner release within mold
- ★ 吸着确认单元(1回路) /Additional vacuum sensing unit (1circuit)
- ★ 横行走待机 /Delayed traverse
- ★ 滑移取出回路 /undercut extract circuit
- ★ 输送带启动信号 /Start signal of Conveyor
- ★ 内部存储记忆(最大50种类型) /Internal Memory(for Max 50 molds)
- ★ 设定值锁定功能 /Lock function of setting value
- ★ 固定可动切换 /Extraction from fixed mold
- ★ 夹具快速交换配件 /Quick Mount chuck attachment
- ★ 3国语言切换(简体中文、日文、英文) /Three language exchange (Chinese(new), Japanese, English)
- ★ 前后自由伺服点 /Crosswise Free Servo point

## 集中伺服放大器 Centralized Servo Amplifier

★ 搭载了伺服放大器与电源集中一体的伺服单元, 省空间同时维护简单。万一某一个轴的伺服放大器发生异常时, 只需交换伺服单元中的该伺服放大器即可。不需要繁琐的ID设定, 只需向伺服单元中插入需换部品, 可自动识别轴及马达容量。另外, 因所有的配线都配在伺服单元侧, 伺服放大器交换时不需插拔信号线。  
Servo Unit with servo amplifier and power. Saving the space and maintain simply. In case of the servo amplifier of some axis occurs to abnormal change, it only needs to replace the servo amplifier in the servo unit. It is unnecessary to set ID and only insert the replacement to the servo unit and recognize the axis and motor capacity. Otherwise, all wire is assembled to the servo unit. There is no need to pull out the signal interlock when replacing the servo amplifier.

## 周期/Cycle (标准行程/standard stock)

- ★ 取出周期: 1.64 秒 /Extraction Cycle: 1.64 second
- ★ 全周期: 6.11 秒 /All cycle: 6.11 second

## 选项功能 Option Function

- ★ 夹具内剪刀回路 /Air nipper in chuck circuit
- ★ NT剪切·可动侧(有单元) /NT gate cutting on crossmember of moving mold side (w/unit)
- ★ 吸着确认单元2回路 /Additional vacuum sensing unit (2 circuits)
- ★ 吸着确认单元4回路 /Additional vacuum sensing unit (4 circuits)
- ★ 制品2点开放/Release product at two different points
- ★ 制品4点开放/Release product at four different points
- ★ 上升途中闭模 /Mold close during ascend
- ★ 回转单元 /Rotation Unit
- ★ 欧规12 /EUROMAP 12
- ★ 制品确认/LS-4 /Product confirmation LS-4
- ★ 顶针后退连动 /Ejector return link
- ★ 欧规67 /EUROMAP 67
- ★ 夹具减压阀 /Chuck pressure regulator
- ★ 警报灯(红色·无蜂鸣器) /Alarm Lamp (Red color, w/o buzzer)
- ★ 操作盒支架 /Pendant stand

STAR SEIKI自1964年在日本成立以来, 在世界各地设立了多个营业所, 售后服务点及工厂。47年间, 在全世界生产了超过150,000台射出注塑机用机械手。中国深圳工厂从2000年开始, 生产了超过20,000台射出注塑机用机械手。2010年, 在中国开发的新机种, 在襄樊工厂生产出的机器品牌确定为

STAR SEIKI has many sales offices and factory all over the world since 1964 established in Japan. It produced automatic unloader for IMM over 150,000 sets in the world during 47 years. Shenzhen factory in China is started to produce from 2000. it produced over 20,000 sets of robot. In 2010, we developed new products in Xiangfan factory. The brand is eins STAR.