

## **STAR ASIA NETWORK**

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ASIA ES4 2022.08



高精度 高速度 HIGH-SPEED







升级为ES-IV之后全周期及取出周期都有大幅度缩短。 不仅能满足之前的常用需求,也能对应客户的高速, 高精度要求。

The full cycle and extraction cycle are significantly shortened after upgrading to ES-IV. Not only can meet the common needs as before, but also can correspond to high-speed and high-precision requirements of customers.



### 通过姿势部振幅的控制, 对插件成型等需要高精度取出的成型非常有效。 STAR不只是速度,精度方面也能保证客户放心使用。

STAR

- X +

The amplitude control of the posture unit is very effective for insert molding, which requires high-precision extraction. STAR can be guaranteed in speed and precision, so customers can rest assured to use it.

# 3 高性能 HIGH-PERFORMANCE

在STEC-NC2的基础上大幅度提高了性能, 能进行各种各样的设定。 FULL CNC全编程功能也更加方便使用 与之前比能更加简单地的做成程序及进行设定。

On the basis of STEC-NC2, the performance is greatly improved and a wide variety of settings can be made. The FULL CNC programming function is also more convenient, making it easier to program and set than before.

通过生产管理和维护保养机能,实时掌握生产状态, 提高设备运转率。定期提示保养与维护,延长机器寿命。 生产信息置于主画面中,方便客户实时查看机器状态。 统一按键布局,减少客户操作。

Through the production management and maintenance function, customers can real-time control the production status and improve operation rate. Prompt customer maintenance regularly to prolong the service life of the Production information is displayed on the main screen for customers to machines.real-time view the machine status.Unified layout of keyboard to reduce customer operations.





## **HIGH-EFFICENCY**

# STEC-NC2c



## ◆优点 ADVANTAGE

- ◎加强型挂钩,结构独立,提高防水效果; Improvement in waterproof effect with enhanced hook and independent structure:
- ◎护角采用嵌入式设计,更加牢固且耐用; More durable embedded angel design;
- ◎接线出口位置改善,避免断线及接触操作员身体; Change of cable outlet position to avoid wire breaking and interference with operators;

◎ 整体肉厚增加,提高强度。 Improvement in strength by increasing overall thickness

## FORWARD TIME 功能 /FORWARD TIME FUNCTION

正式の形

1278 NG 3875



通过追加程序预判 (Forward Time) 功能, 可以削减动作之间的时间。 在插件等多点动作的程序中充分发挥效力。

It is possible to cut down the time between actions by adding Forward Time , which is fully effective in insert and other programs with many action points.



此功能可以在操作盒的轴参数设定画面进行设定。 设定范围为1~25,即4ms~100ms ※标准设定为10(40ms)。 客户可以根据取出机的实际运转状况 设定Forward time, 以达到取出机的 最佳运行状态

This function can be set in the axis parameter setting screen of the pendant. The value range is 1 to 25, that is 4~100ms. %The standard setting is 10(40ms). The customer can set Forward time according to the actual operation of the robot to achieve the best running state.

# FULL NC编程 / FULL NC PROGRAMMING

	FullNC无模式 Full NC W/O MODE	FullNC有模式 Full NC WITH MODE
客户程序编程难易度 Program editing difficulty	客户只需要按实际动作流程编写程序 The customer only needs to edit the program according to the actual action flow	客户需要考虑各模式的动作流程,然后再编写程序,否则与实际动作不符 The customer needs to confirm the action flow of each mode, and then edit the program, otherwise it is inconsistent with the actual action
客户程序标签使用数 Program tags usage number	4	48
客户子程序跳转使用次数 Subroutine jumps usage number	13	77
特殊Memory使用数 Special Memory usage number	7	14
	有模式 W/ MOD	CALCULATION AND ADDRESS OF ADDRES



程序改造简单,但无标准模式供选择 客户需根据自身需求作成程序。 Program transformation is simple, but there is no standard mode for choice, customers need to make the program

#### according to their own needs.

# **IoT** /IoT FUNCTION



#### 通过新开发的C2ETH基板,可对应客户的IoT需求, 将取出机稼动数据上传至客户端。 选项对应时,只需将稼动数据输出仕样告知客户,由客户自行采集数据进行显示。

With the newly developed C2ETH board, it can upload the operation data of the robot to the client according to the customer's IoT requirements. When corresponding options, just need to inform the customer dynamic data output, and the data will be collected by customer themselves for display.





#### 可利用手机扫描操作盒维护保养菜单中的二维码, 连接登录敝司技术支持专用网站,网站上有关于机械手的说明、维护、操作等资料。

You can use the mobile phone scanning pendant maintenance menu QR code to connect the Technical Support website, which publishes instructions, maintenance, operation and other information about the robot.



程序改造相对困难,但有多种标准模式可选, 能够快速对应基本的生产需求。

Program transformation is relatively difficult, but there are a variety of standard modes for choice, which can quickly respond to basic production needs.



### 细节介绍 DETAILS



# 操作 / OPERATION



#### 将段取换的保存与读取权限进行分开管理 防止非技术人员因程序错误的编辑保存和调取使用,导致工厂的生产不良。

The save and read permissions of step change data are separately managed to prevent non-technical personnel from causing bad production in the factory due to program error editing, saving and retrieving.







利用强制IO,可以对电磁阀等信号进行强制的ON,OFF操作

便于在没有实际设备时确认动作和程序,从而提升程序编辑以及问题查找的效率, 并增加了安全提示功能。

※操作安全方面可能会造成不便,具体式样方法请向敝司售后人员咨询。

With forced IO, signals such as solenoid valves can be forced ON/OFF, it is easy to confirm actions and programs in the absence of actual equipment, thereby improving the efficiency of program editing and problem finding, and added safety tips.

\* It may cause inconvenience in operation safety, please consult our service engineer for specific methods



#### 在当前涉及多元化的中国市场中, 取出机默认使用的是标准规格的成型机,欧洲规格和中国规格的式样可以在操作盒上进行切换。 ※欧规接头式样需要另外选择选项。

Robot uses standard molding machine programs by default, and European and Chinese models can be switched on the pendant.

%The Euro MAP specification requires an additional options.

# 「机械 /MECHANICAL



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ESW-IV系列机种, 固定结构。

ESW-IV series. The crosswise arms are changed from the previous door - shaped ,double - side support structure to a single - side fixed structure.

◆优点ADVANTAGE 通过单边固定结构的改善减轻机器重量, 在强度不变的前提下缩短周期。

Through the improvement of the unilateral fixed structure to reduce the weight of the machine, shorten the cycle under the premise of constant strength

A: 全高 Overall height G: 制品上下待机位置 Vertical standby H: 夹具安装位置上方有效尺寸 Effective size above chuck installation position

取出机全高降低,可以对应更严苛的客户工厂环境; 制品上下待机位增大,可以让客户更灵活的使用夹具。

Reduce the overall height for more stringent factory environment. Customers can use chucks more flexibly with the increased Product Vertical standby position .

### ◆变化点CHANGE POINT

ES(W)-IV系列全机种 真空单元由 ZK2变更为新型真空单元。 The vacuum unit of ES(W)-IV series is changed from ZK2

to new vacuum unit.

### ◆ 优点 ADVANTAGE

新真空单元工作可靠(滤芯不易堵塞);集成度高、 易于扩展 (真空破坏);供给阀使用双线圈电磁阀, 正常停止后切断电源真空单元不排气(节能)。

The new vacuum unit works reliably (filter element is not easy to block); High integration and easy to expand (vacuum damage); Supply valve using double coil solenoid valve, vacuum unit does not exhaust after normal stop & cutting off power supply (energy saving).



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STAR SERIES

### ◆变化点 CHANGE POINT

前后臂由之前的门型双侧支撑结构变更为单边

### ◆变化点CHANGE POINT

制品上下配线配管全部采用隐藏式设计。

Product vertical harness and tube are all used hidden design.

# 机械手功能 | FUNCTIONS

### **7准功**能

	功能名	/ 功能说明					
	取出下降待机	开模完毕前,夹具下降至模具附近待机,有效缩短取出周期。可任意变更设定位置。					
	前进取出侧姿势控制	在姿势动作的状态下通过安全门上方,为避免在姿势动作状态下夹具与走行体或者模具上方障碍物干涉,可 任意设定姿势动作的前后位置。					
	节能吸着确认单元 (1回路)	使用真空发生单元1回路取出产品。					
取	自由滑移取出	取出有扣位的产品时,在抓取到产品后根据轴设定值移动,解除扣位后取出产品。					
出側	顶针连动	通过注塑机的顶针连动, 取出产品。					
נאר	顶针后退连动	抓取住产品后,通过注塑机中的顶针连动,取出产品。					
	水口模内开放	产品或水口从模具上剥离后,需要直接在模内开放时选择此功能。					
	固定可动切换	标准机从模具可动侧取出产品,可切换至固定侧从模具固定侧取出产品。					
	前后自由伺服点	在产品夹取位置限制前后轴的伺服马达扭矩,防止对手臂增加负荷时造成损伤。					
	走行途中姿势	走行前进与姿势动作同时执行,走行复归与姿势复归同时执行,可缩短全周期。					
	水口返程开放	水口在产品开放后进行开放动作。					
	浇口途中开放 (走行•复归)	浇口在走行往返途中进行开放动作。					
一	不良品排出 (可计数)	与注塑机发出的不良品信号联动,进行不良品排出动作,并且可以设定开放到不良品位置的次数。					
走行	初期成型品排出	换模或换料后,在刚开始的一段时间即使注塑机生产的产品是不良品的情况下,自动开始后,根据初期成型 排出计数器的设定,将设定次数内的产品开放到不良品位置之后,再进行正常运转。					
	横走行待机	如果模具上方有障碍物,机械手或者夹具在模具没有完全打开的情况下有干涉时,取出机可以在模具外等待模 具完全打开后走行向模具上方移动。					
	落下侧下降途中姿势	在产品开放下降途中进行姿势反转动作。在上升途中进行姿势反转复位动作。					
	装箱点	与输送带或排列机等装箱设备联动,进行产品的装箱动作。(各轴256点)					
落下	自由装箱点 (100点×2级)	设定从注塑机中取出的产品的随机开放顺序。					
侧	输送带启动信号	产品开放完毕后,启动输送带动作信号。					
	3国语言切换 (简体中文、日文、英文)	操作盒的显示画面可切换3国语言。日语·英语·汉语(简体字)为基本的切换语言。					
	插入式用户编程	NC步进程序的简易设定功能。在步进操作中可指定插入位置。					
	外部存储记忆	换模信息 (最大1000套) 保存在SD卡。					
	设定值隐藏功能	通过隐藏功能只显示需要的轴点、时间等,能够缩短设定时间。提高作业效率。					
其他	伺服休眠	在超过设定时间后的待机中,关闭马达电源。					
	背景灯自动OFF	超过[屏幕保护时间设定]设定的时间如果不操作操作盒,背景灯则关闭。					
	USB通信端口	可轻松连接电脑。					

### 、选项功能

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	功能名	/ 选项编号	/ 功能说明
	吸着确认单元 ( 2回路)	0007-04	使用真空发生单元2回路取出产品。
	吸着确认单元(4回路)	0007-06	使用真空发生单元4回路取出产品。
取	夹具减压阀	0081-01	调整夹具的抓取力。
出	旋转功能	0025-01~04	进行夹具板旋转动作。可以选择在模内、模外、落下侧进行旋转动作。
侧	上升途中闭模	0055-01	模内上升途中,使注塑机开始闭模,缩短开模时间,提高周期的仕样。
	制品确认(L4)	0087-02	上升途中安装限位开关,检知产品。
	剪切回路(夹具内)	0008-01	使用夹具内气剪(1回路)剪切水口的时候, 需要此仕样。 自动运转时在落下侧的产品开放位置, 产品开放前进行此动作。
落下	制品2点开放	0001-02	在两处进行制品开放动作。 产品夹取变为2回路。
└侧	制品4点开放	0001-03	在四处进行制品开放动作。产品夹取变为4回路。
	NT剪切·可动侧(有单元)	0009-01	以处理产品水口为目的,在落下侧的走行导轨端安装NT单元气剪,切断水口。
	警报灯 ( 红色・无蜂鸣器)	0024-01	机械手发生警报 ( 异常 ) 时, 警报灯亮。 因机种不同, 警报灯的安装位置也有所不同。 需确认。
	自动快速交换用夹具(气压式)	8003-01	可快速装卸夹具。
其	操作盒支架	0005-11	操作盒专用支架。
	欧规 12	0063-02	欧规 12
	欧规 67	0063-03	欧规 67

### STANDARD FUNCTIONS

	Function Name	
	Descent stand-by	Shorten the cycle time by making the pro
	Crosswise product extract side posture control	Used to first carry out posture action on products. Avoid interference with an obs of advance action. Crosswise position is
	Vacuum confirmation unit (1circuit)	Products are extracted with vacuum gen
Product Extract Side	Free extract for under-cut mold	Extracting the products with snap joints extracted after unlocking the joints.
tExtr	Ejector link	Product extraction is performed connec
act S	Ejector return link	The ejector of IMM is interlocked after h
ide	Runner release within mold	Used to release products or runners with
	Extraction from fixed mold	It can be selected to take the products fr
	Crosswise Free Servo point	The torque of the servo motor of an ante to an arm is prevented.
	Posture control during traverse	All the cycles can also be shorten by car traverse action.
	Runner release on return	Runner is released after the product is o
	Midway Sprue Release(Traverse-Return)	Sprue is released during the way of trave
Traverse	Defective product reject	Defective products are separated from o the position of defect can be set.
rse	Initial Products Release	Release only the number of extracted pr automatic operations when faulty produ material.Normal operations are then per
	Delayed traverse	Make the unloader stand by out of the m
	Posture midway descent at release side	Operation of posture reversal is carried performed in the middle of a rise.
Produc	Point packaging	Packaging operation carried out by linking
Product Release Side	Point free packaging ( $2\mathbf{stage}$ , 100 points )	Set the order to randomly release the pro
Side	Start singal of conveyor	After opening a product wide, the signal
	Three language exchange (Chinese (new), Japanese, English)	Language switching between three langu (new character format).
	$\textbf{Easy NC steps} \left( \textbf{USER PROGRAM EDITING} \right)$	Features the simple NC step program set operations.
	External storage memory	Recordable step changes ( Max molds ).
Other	Default blind feature	The teaching time is reduced by the defa operation efficiency is improved .
	Servo sleep feature	Motor power is turned off after the set ti
	Backlight Auto OFF	The backlight goes out if no pendant ope
	USB CONNECTION	Easily connect to the computer.

### **OPTION FUNCTIONS**

			/
	Function Name	Code no.	
	Vacuum confirmation unit (2circuits)	8020-01	Produ
	Vacuum confirmation unit (4circuits)	8020-02	Produ
rodu	Chuck pressure regulator	0081-01	Adjus
Product Extract Side	Rotation Unitregulator	0025-01~04	Used within
act S	Mold close during arm ascent	0055-01	Used
ide	Product confirmation L4	0087-02	Detec
	Air nipper in chuck circuit	0008-01	Used When
Product	Release product at two different points	0001-02	Two d Two c
Release Sic	Release product at four different points	0001-03	Four o Four o
duct Release Side NT g	NT gate cutting on crossmember of moving mold side (w/unit)	0009-01	For pu releas
	Alarm Lamp (Red color,w/o buzzer)	0024-01	The al Moun
0	Quick chuck change automatic (air sw)	8003-01	One-t
Other	Pendant stand	0005-11	Stand
	EUROMAP 12	0063-02	EURO
	EUROMAP 67	0063-03	EURO



#### Description

roduct-side/runner-side vertical arm stand by just above the mold. Setting position is adjustable

on the extracting side and then start traverse action after extracting vertically extended bstacle on mold or the traverse rail, used to carry out the posture action after the completion is adjustable.

enerator ( tacovam ) 1 circuit

ts, moving it according to axis setting after taking the products. The products can be

ecting with the ejector of IMM.

holding a product.

ithin mold after pulling them out of the mold.

from fixed or moving side of mold.

teroposterior axis is restricted in a product chuck position. The damage to when load is added

arrving out traverse return and posture return together after products were released during

opened.

verse axis walking forward or returning.

other products intelocked with the defect signal of IMM, and the number of times to open at

roducts and sprues preset with the product-counter to the defect position after the start of lucts exist after the continuation of molding following the replacement of the metal mold or erformed after this.

molding machine's door if there are obstacles in the mold moving section.

I out in the middle of downward of product opening. Return operation of posture reversal is

king with packaging device of conveyer or of pallet changer. ( Max 256 points )

roducts extracted form the molder.

al of a conveyor start is taken out. there are obstacles in the mold moving section.

guages can be used for display. Basically used languages are Japanese, English, and Chinese

settings. This makes it possible to designate positions for interruptions in mold changing

s). A memory is carried out to Micro SD card.

ault blind feature that enables only axis point, timer, etc, required for actions to display. The

time.

peration is performed for the period set with the [ DISPLAY OFF TIME ] function.

#### **Description of option**

ducts are extracted with vacuum generator (tacovam) 2 circuits.

lucts are extracted with vacuum generator (tacovam) 4 circuits.

ist the gripping force of the chuck

to prevent product from hitting the robot in the mold, in the mold or on the release side by rotating the chuck plate.

to shorten the molding time by starting the mold closing on the way to ascent.

ects the product mounting the limit switch in the middle rise.

d to take the cutting of direct gates or side gates with the air nipper in the chuck plate. en in automatic operation, cutting is made at product release position before the product release.

different products are extracted and released to different positions on the release side.

circuits are required for the chucking.

r different products are extracted and released to different positions on the release side. r circuits are required for the chucking.

purposes of product gate processing, the air nipper in the NT unit mounted at the end of the ase-side traverse rail is used to cut gates at 2 points.

alarm lamp is switched on a light when there is a alarm (error) in the robot. unting positions are different with robots.

-touch simple mating/demating of chuck plate.

nd of operation pendant only

OMAP 12 Specification

OMAP 67 Specification







D is 281, [281]<sup>12</sup>, [301]<sup>13</sup>, [301]<sup>14</sup>

anti-operator side d is 77、[77]<sup>2</sup>、[0]<sup>3</sup>、[0]<sup>1</sup>

单截 Sir	1					77	<b>ES</b> -1	<b>300</b>	sIV		
100~3 Injection pres	ss range 100	)~350ton		c				-	*)	av :	
<b>综合参数</b> │ GENERAL SPECIFICATIONS 电源 常用气压 驱动方式 姿势(4		姿势(气缸) 气动姿势部推力 <sup>(气压:0.5Mpa时)</sup> Air Cylinder Driving Force (Air Pressure at 0.5Mpa) 控制箱						275			
Power Source	Air Press			取入り版里重 Max. Load 安労力起 Posture Torque				Control Box			
50/60Hz(单相) Single Phase	0.5M	Jd .	司服马达 rvo Motor	90°西 90° Fix	Stand	dard posture: 5kg[8k 兵重量 Incl Chuck V	(g] [	13.1N·m 20.6N·m]	S	TEC-NC2c	
机种		行程(種	多动量)(mm) S	Stroke		电源设备容量	最大消费电力	机器重量(k	g) Net Weight	空气消耗量	◎[ ]内的 ◎水口夹6
176 주면 Model	制品上下 <sup>® Vertical</sup>	水口上下 ® Vertical	前 Crosswis		走 行 Traverse	(KVA) Electric Consumpiton	(KW) Max Power Consumpiton	本 体 Main Body	操作盒 Pendant	(Nℓ/周期) Air Consumption (Nℓ/Cycle)	◎姿势部J Thicknes ◎水口侧。
ES-800IV	800	—	90~85 [90~10		1400	1.8	1.1	225			Runner 机种
ES-800sIV	[1000]	850 [1050]	P 245~1     R 105~7     [ P 245~1     [ P 245~1     [ R 105~8	710 1000 j	[1200] [1600] [1800]	2.4	1.4	245	- 1.1	2.11	ES-80

○ P 表示制品侧手臂, R 表示水口侧手臂。
 ○关于最大可搬重量,详情请咨询敝司营业担当。

 $\bigcirc$ In the column of stroke,  $\bigcirc$  stands for product side arm and  $\circledast$  stands for runner side arm.

OFor details of the maximum allowable weight, please confirm with our sales man.

### 全伺服驱动机械手 Full servo drive robot

单截 Single arm





综合参数	GENERAL S	<b>SPECIFICATIO</b>	NS

电源 Power Source	<b>常用气压</b> Air Pressure			气动姿势部推 Air Cylinder Driving Force 最大可搬重量 Max. Load		控制箱 Control Box
AC200V ±10% 50/60Hz(单相) Single Phase	0.5Mpa	AC伺服马达 AC Servo Motor	90°固定 90°Fixed	标准姿势部:5kg[8kg] Standard posture:5kg[8kg] (含夹具重量 Incl Chuck Weight)	20.6N·m	STEC-NC2c

机种		行程(種	多动量) <sup>(mm)</sup> Stroke		电源设备容量	最大消费电力	机器重量(kg	空气消耗量	
ባንቴ ተተ Model	制品上下 <sup>® Vertical</sup>	水口上下 ® Vertical	前 后 Crosswise	走 行 <sup>Traverse</sup>	(KVA) Electric Consumpiton	(KW) Max Power Consumpiton	本体 Main Body	操作盒 Pendant	(Nℓ/周期) Air Consumption (Nℓ/Cycle)
ES-1000IV	1000	_	90~1000	1800	1.8	1.1	248	1.1	2.31
ES-1000sIV	1000	1050	<ul> <li></li></ul>	[1600]	2.4	1.4	269	1.1	2.01

○[ ]尺寸表示选项行程。 ◎本体重量包括控制箱及电缆线的重量。

11

○ (P)表示制品侧手臂, (R)表示水口侧手臂。
 ○关于最大可搬重量, 详情请咨询敝司营业担当。

 ◎ Figure in [ ] shows option stroke.
 ◎ Net weight includes the weight of interlock box and driver box. 

### 尺寸 | OUTER DIMENSIONS









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410

<ul> <li>◎[]内的尺寸表;</li> <li>◎水口夹的厚度为</li> <li>◎姿势部厚度为74 Thickness of pos</li> </ul>	25mm。/ Imm。但根	- Thickness 据配管方式	of runner cl c不同, 此尺	huck is basi 寸多少会有	ca <b>ll</b> y about 与些不同。			
机种 <sub>Model</sub>	А	В	С	D	E	F	G	
ES-1000IV	1780	2390	1800	300	290	1000	250	
ES-1000sIV	1820	[2390]°1	[1600]°1	[300]°1	[490]° <sup>1</sup>	1000	200	

D is 285、[285]"

As anti-operator side E is 305, [505]\*1

(mm) ※反操作时E值305、[505]\*1 D值285、[285]<sup>\*1</sup>

Н

265

As operator side d is 50, [50] anti-operator side d is 10, [10]

反操作时为10、[10]"

	000111118 /	1 111011 0		10 1000 111				
I	J	К	L	Μ	N	0	Р	Q
1295	410	_	4000	910	90	_	_	_
1233	410	300	1000	755	245	140	755	105
			111					

◎\*1表示C尺寸为1600mm。/ \*1 When dimension C is 1600 mm.

◎水口侧上下行程比制品侧上下行程长50mm。 / Runner side vertical stroke is 50 mm longer than that of product side.



反操作	≣时为4C	(40]	*2、[	10]	<sup>3</sup> 、[1	0].	4		
As oper	ator side	d is 8	0、	[80]	]*2、	[50	)]*3、	[50]*4	

Ν

90

\*/d值正操作时为80、[80]<sup>12</sup>、[50]<sup>13</sup>、[50]<sup>14</sup>

Ο

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Q

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105

Ρ

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605

[755]\*5

anti-operator side d is 40, [40]<sup>2</sup>, [10]<sup>3</sup>, [10]<sup>4</sup>

245 140 [755]\*

Μ

760

[910]\*

605

L

850

1000]

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300



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STAR ES-IV SERIES

│ 単截 Si	ngle arm	1						i n				SIV		
350~6 Injection pre	ss range 350			ONS							ST 55-0005	w III		
电 源 Power Source	常用气 Air Press	压 驱	动方式 re System	姿势( <sup>4</sup> Posture (Air		最大	气动姿势 Air Cylinder Driv 大可搬重量 Ma	ing Force (/	Air Press		rque	控制箱 Control Box		
AC200V ±10% 50/60Hz(单相) Single Phase	0.5M	Ja .	同服马达 rvo Motor	90° [ 90° Fi		标准 Stand	E姿势部:10kg lard posture:10kg[ 具重量 Incl Chuck V	[12kg] 12kg]		59.0N·m	S	Control Box STEC-NC2c eight 空气消耗量		
机种		行程(利	多动量)(mi	m) Stroke			电源设备容量	最大消费	睫力	机器重量(k	g) Net Weight			
176 주부 Model	制品上下 <sup>® Vertical</sup>	水口上下 ® Vertical		后 iswise	走 <sub>Trave</sub>		(KVA) Electric Consumpiton	(KW Max Po Consum	wer	本体 Main Body	操作盒 Pendant	- (Nℓ/周期) Air Consumption (Nℓ/Cycle)		
ES-1200IV	1200	_	140~	~1240	180		2.9	1.7	7	438		E 44		
	[1400]		_	)~1240	[160 [200						1.1	5.11		

○本体量量包括控制相反电缆线的量量。
 ○ (P)表示制品侧手臂,(R)表示水口侧手臂。
 ○关于最大可搬重量,详情请咨询敝司营业担当。

OIn the column of stroke, D stands for product side arm and B stands for runner side arm.

©For details of the maximum allowable weight, please confirm with our sales man.

# 全伺服驱动机械手 Full servo drive robot

双截 Double arm





### ▶ 综合参数 | GENERAL SPECIFICATIONS

电源 Power Source	常用气压 Air Pressure			气动姿势部推 Air Cylinder Driving Force 最大可搬重量 Max. Load		控制箱 Control Box
AC200V ±10% 50/60Hz(单相) Single Phase	0.5Mpa	AC伺服马达 AC Servo Motor	90°固定 <sup>90° Fixed</sup>	标准姿势部:5kg[10kg] Standard posture: 5kg[10kg] (含夹具重量 Incl Chuck Weight)	13.1N∙m [20.6N∙m]	STEC-NC2c

机种		行程(種	多动量)(mm) Stroke		电源设备容量	最大消费电力	机器重量(kg	g) Net Weight	空气消耗量	
176 个中 Model	制品上下 <sup>® Vertical</sup>	水口上下 ® Vertical	前 后 Crosswise	走 行 <sup>Traverse</sup>	(KVA) Electric Consumpiton	(KW) Max Power Consumpiton	本体 Main Body	操作盒 Pendant	(Nℓ/周期) Air Consumption (Nℓ/Cycle)	
ESW-800IV		_	90~790 [90~940]	1400	2.3	1.4	234			
ESW-800sIV	800 [1000] [1200]	850 [1050] [1250]	<pre></pre>	[1200] [1600] [1800]	3.5	2.1	259	1.1	2.22	

◎[ ]尺寸表示选项行程。 ◎本体重量包括控制箱及电缆线的重量。

○ P 表示制品侧手臂, R 表示水口侧手臂。
 ○关于最大可搬重量,详情请咨询敝司营业担当。

Figure in [ ] shows option stroke.
 Net weight includes the weight of interlock box and driver box.
 In the column of stroke, <sup>®</sup> stands for product side arm and <sup>®</sup> stands for runner side arm.
 For details of the maximum allowable weight, please confirm with our sales man.





<ul> <li>◎[]内的尺寸表示选项行程。/ Figure in [] shows option stroke.</li> <li>◎水口夹的厚度为25mm。/ Thickness of runner chuck is basically about 25 mm.</li> <li>◎姿势部厚度为97mm。但根据配管方式不同,此尺寸多少会有些不同。/ Thickness of posture area is basically about 97 mm (depends on tubing)</li> <li>◎水口侧上下行程比制品侧上下行程长50mm。/ Runner side vertical stroke is 50 mm longer than that of product side.</li> </ul>												
机种 <sup>Model</sup>	A B C D E F G											
ES-1200IV	2123 [2363]*1	2486 [2486]*2			373 [573]*2	1200	266	328	16			
ES-1200sIV	2160 [2400]°1	[2886]* <sup>3</sup> [2886]* <sup>4</sup>	[2000]*3 [2200]*4		[573]* <sup>3</sup> [373]* <sup>4</sup>	[1400]*1	200	320				
(mm) *			528] <sup>*2</sup> 、[528	8]*3、[328]*4								
D值为358												
	As anti-operator side E is 328、[528] <sup>-2</sup> 、[528] <sup>-3</sup> 、[328] <sup>-4</sup>											
	D is 358											

# ▶ 外观尺寸 | OUTER DIMENSIONS 1 -10 -8 - D - EI



◎[]内的尺寸表	示选项行程	₹。/ Figure	e in [ ] sho	ows option	stroke.			◎*1表示F尺寸为1000mm。 / *1 When dimension F is 1000 mm.									
◎水口夹的厚度≯	与25mm。/	Thickness	of runner c	huck is bas	ica <b>ll</b> y about	25 mm.		0*2	2表示F尺寸	为1200mn	n <sub>o</sub> / *2 W	'hen dimens	sion F is 120	0 mm.			
◎姿势部厚度为6						/		◎*3表示C尺寸为1200mm。/ *3 When dimension C is 1200 mm.									
Thickness of posture area is basically about 69 mm (depends on tubing)									4表示C尺寸	为1600mm	n₀/ *4 W	/hen dimens	sion C is 160	00 mm.			
	◎水口侧上下行程比制品侧上下行程长50mm。 / Runner side vertical stroke is 50 mm longer than that of product side.											/hen dimens	sion C is 180	00 mm.			
	Runner side vertical stroke is 50 min longer than that of product side.									◎*6表示L尺寸为940mm。/ *6 When dimension L is 940 mm.							
机种 <sup>Model</sup>	A	в	С	D	E	F	G	н	I	J	к	L	М	Ν	o	Р	Q
ESW-800IV		1970 [1970]*3		280 [280]*3	290 [490]* <sup>3</sup>	800	050	0.05	1145	44.0	_	790	700 [850]*6	90	_	_	_
ESW-800sIV	1200 [1300]*1 [1400]*2	[2390]* <sup>4</sup> [2390]* <sup>5</sup>	[1600]° <sup>4</sup> [1800]° <sup>5</sup>	[300]° <sup>4</sup> [300]° <sup>5</sup>		[1000]° <sup>1</sup> [1200]° <sup>2</sup>	250	235	[1295]*6	410	300	[940]*6	510 [660]° <sup>6</sup>	280	126	510 [660]**6	154
(mm) *												*	d值正操作 反操作时		D]*3、[50]*4、 3、[10]*4、[10		
	<ul> <li>m) ※反操作时E值为305、[505]<sup>3</sup>、[505]<sup>4</sup>、[305]<sup>5</sup> D值为265、[265]<sup>3</sup>、[285]<sup>4</sup>、[285]<sup>5</sup>.</li> <li>As anti-operator side E is 305、[505]<sup>3</sup>、[505]<sup>4</sup>、[305]<sup>5</sup> D is 265、[265]<sup>3</sup>、[285]<sup>4</sup>、[285]<sup>5</sup>.</li> </ul>												As operator s anti–operator			0] <sup>*4</sup> 、[50] <sup>*5</sup> 10] <sup>*4</sup> 、[10] <sup>*5</sup>	



STAR ES-IV SERIES



### 全伺服驱动机械手 Full servo drive robot

双截 Double arm





### ▼ 综合参数 | GENERAL SPECIFICATIONS

电源 Power Source	常用气压 Air Pressure	驱动方式 Drive System	姿势(气缸) Posture (Air Cylinder)	气动姿势部推 Air Cylinder Driving Force 最大可搬重量 Max. Load		控制箱 Control Box
AC200V ±10% 50/60Hz(単相) Single Phase	0.5Mpa	AC伺服马达 AC Servo Motor	90°固定 90° Fixed	标准姿势部:10kg[15kg] Standard posture: 10kg[15kg] (含夹具重量 Incl Chuck Weight)	59.0N·m	STEC-NC2c

机种		行程(種	多动量) <sup>(mm)</sup> Stroke		电源设备容量	最大消费电力	机器重量(kg	g) Net Weight		
<b>17 ሀ ተ</b> ተ Model	制品上下 <sup>® Vertical</sup>	水口上下 ® Vertical	前 后 Crosswise	走 行 Traverse	(KVA) Electric Consumpiton	(KW) Max Power Consumpiton	本体 Main Body	操作盒 Pendant	(Nℓ/周期) Air Consumption (Nℓ/Cycle)	
ESW-1200IV		_	158~1338 [158~1538]	4000	2.9	1.7	457			
ESW-1200sIV	1200 [1400] [1700]	1250 [1450] [1750]	P 328~1338 R 137~1147 [P 328~1538 [R 137~1347]	1800 [1600] [2000] [2200]	4.5	2.7	501	1.1	9.62	

◎[ ]尺寸表示选项行程。 ◎本体重量包括控制箱及电缆线的重量。

○ (P)表示制品侧手臂, (R)表示水口侧手臂。
 ○关于最大可搬重量, 详情请咨询敝司营业担当。

◎Figure in [ ] shows option stroke.

ONet weight includes the weight of interlock box and driver box. OIn the column of stroke, D stands for product side arm and B stands for runner side arm.
For details of the maximum allowable weight, please confirm with our sales man.

## ▶ 外观尺寸 | OUTER DIMENSIONS



<ul> <li>○水口夹的厚度为</li> <li>○姿势部厚度为74 Thickness of post</li> <li>○水口側上下行程</li> </ul>	<ul> <li>○[]内的尺寸表示选项行程。/ Figure in [] shows option stroke.</li> <li>○水口夹的厚度为25mm。/ Thickness of runner chuck is basically about 25 mm.</li> <li>○姿势部厚度为74mm。但根据配管方式不同。此尺寸多少会有些不同。/ Thickness of posture area is basically about 74 mm (depends on tubing)</li> <li>○水口例上下行程长影0mm。/ *2 When dimension C is 1600 mm.</li> <li>○水口例上下行程长影0mm。/ Runner side vertical stroke is 50 mm longer than that of product side.</li> </ul>																	
机种 <sup>Model</sup>	А	В	С	D	Е	F	G	Н	I	J	К	L	М	N	0	Р	Q	
ESW-1000IV	1300 [1400]*1	2390	1800	300	290	1000	250	0.05	1005	440	_	940	850	90	-	-	-	
SW-1000sIV		[2390]*2	1000	[300]"2		[490]°²	[1200]*1	200	235	1295	410	300	010	660	280	126	660	154
(mm) ※反操作时E值为305、[505] <sup>2</sup> D值为285、[285] <sup>2</sup> As anti-operator side E is 305、[505] <sup>2</sup> D is 285、[285] <sup>2</sup>									*	反操作时 As operato	时为50、[5 为10、[10] r side d is 5 tor side d is	2 <sup>2</sup> 0、[50]*2						



<ul> <li>◎水口夹的厚度为25mm。/ Thickness of runner chuck is basically about 25 mm.</li> <li>◎姿势部厚度为97mm。但根据配管方式不同,此尺寸多少会有些不同 Thickness of posture area is basically about 97 mm (depends on tubing)</li> <li>◎水口側上下行程比制品側上下行程长50mm。 Runner side vertical stroke is 50 mm longer than that of product side.</li> </ul>											
机种 <sub>Model</sub>	А	В	С	D	E	F	G	н			
ESW-1200IV	1551 [1647]° <sup>1</sup> [1791]° <sup>2</sup>	2486 [2486]*3	1800 [1600]*3	212	373 [573]*3	1200 [1400]*1	100	254	1		
ESW-1200sIV	1551 [1647]° <sup>1</sup> [1791]° <sup>2</sup>	[2886]° <sup>4</sup> [2886]° <sup>5</sup>	[2000]*4	513	[573]° <sup>4</sup> [373]° <sup>5</sup>	[1700]* <sup>2</sup>	196	354	[20		
(mm) *	C	值为328、[i 0值为358 erator side E D									









As operator side d is 59, [59]"3, [59]"4, [59]" anti-operator side d is 0,  $[0]^{3}$ ,  $[0]^{4}$ ,  $[0]^{5}$ 



0 0