

## STAR



SFMV ROEOT CFIFLOG

©


In
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$Y$
 UPGRADED ESW-III SERIES IS LAUNCHED WITH GREAT RIGIDITY, SHORT CYCLE AND ROBOTIC FUNCTION.


## 



NEW 寅改文字内突时可䑳入词组。
＋USB通信端口 usb connection


＋搭载高性能CPU，反应灵敬。 Improvement w operation response with hich－speed cru

＋护角及防断线设计
to preveni broken wire in conner guard and cable


＋控制•动力电源分离
SEPRRATION OF CONTROL AND POWER SUPPLY
 Sale reboot and readicion of recolver time with emergent power source．
＋制振控制 vibation control

＋标配绝对编码器 Standoard use of absolute encooder



＋3国语言切换（选项）there－Lancuace swiching



650～50
高刚性，短周期，高性能的伺服马达驱动型机械手
HIGH RIGIDITY，SHORT CYCLE AND ROBOTIC FUNCTION SERVO MOTOR DRIVEN ROBOT

## 



操作简单 EASY OPERATION
保持菜单栏显示 CUSTOM MENU SETTINGS常用按旔始终显示在画面左侧 Menu disppay buttons can be rearranged，in frequency order．
调整取出周期 Extract cycle adJustmen输入制品取出时间后，即可自动调节上下前后轴的速度和加速度。 Speed and acceleration of veritical crosswise axes are automatically
adiusted by entering the product extract time．

自动调整顶针计时器 EJECTOR TIMER AUTO ADJUSTMENT可自动调整顶针前进计日时器。
The eijector a a
The ejector advance timer can be automatically adjusted．
PASS动作后的直线距离显示功能 DIRECT DISTANCE DIIPLLY FUNCTION AFTER PASS OPERATION在原来的PASS设定上，显示PASS动作后的直线距离。在原来的PASS设定上，显示PASS动作后的直线距离。
Direct distance after pass
operation is display in the

操作盒显示吸着压力数值
VACUUM PRSSURE INDICATION ON PNDANT
检测压力值设定。（ 。标准1回路）
Displays of the amount of suction as well as the suction pressure for confirming

节能 ENERGY SAVING FEATURE

## 伺服休眠功能 SERvo SLEEP FEATURE

超过设定的时间后进入待机状态，自动OFF马达电源。 Motor power is turned off ater the set time．成型周期自动联动 moLD CYCLE AuTo Link机械于的动作配合成型周期，与注槊机同步动作。

节能监测功能 Energy－Saving montor
通过画面确认耗电量，及时发现电量浪费现象，节约用电。
Display of consumed electric power for power savings．

## 提高生产效率 IMPROVED PRODUCTION EFFICIENCY

生产管理功能 PRODUCTION CONTROL FEATURE南入预定生产数量即可显是出生产完成时间。品有显示生产实际数量充计表和抽样检章功能，更有利于成型品的品质管理。 Inputs the number of pieces to be produced，and the estimated time of
production is displayed．Other features such us graphing of production results production nis sisplayeded Other features such us graphing of proat
and samping also contribute to better product quality control．初期不良品排出 INTTIAL RELEASE抽样检查功能 SAMPLE RELEASE

## 安全性 SAFETY

干涉检测功能 colusion detect function因挜作失误，设定失误等原因引起机器干涉时，何服马达紧急 Current monitor of a servo motor reduces damage by hard braking of the

保养功能 maintenance feature
画面上显示给油，定期点检时间。可通过查阅
历史记灵（日明）期信息进行保美确认。
Lubrication and scheduled inspection schedules（oiling and regular inspection）are diplayed on the screen．The maintenance history（with dates）
is also displayed for conirmation．

周期确认运转 ONE CYCLE CHECK OPERATION
可通过一键启动连续步进动作，确认1个周期的运转清况。
环保设计 LOW STRESS ON ENVIRONMENT
环保设计 environmentally frienoly design减少铅，六价铬等环境有害物质的使用，专为环保而设计。 Environmental loading materials such as lead and hexavalent chromium are reduced．
符合RoHS CONFORMS To RoHS
选项功能 OPTIONAL
CNC全编程 FULLCNC
客户可以自己编与程序。

标准功能 STANDARD FUNCTIONS

|  | 功能名 Function Name | 说 明 Description |
| :---: | :---: | :---: |
|  | 取出下降待机 <br> Delayed arm descent |  <br> Shorten the cycle time by making the product－side／runner－side vertical arm stand by just above the mold．Setting position is adjustable． |
|  | 前进取出伆姿势控制 Crosswise product extract side posture control |  |
|  | 吸着确认单元（1回路） <br> Vacuum confrmation unit（1circuit） | 使用真空发生单元1回路取出产品。 <br> Products are extracted with vacuum generator（tacovam） 1 circuit． |
|  | 自由滑移取出 <br> Free extract for under－cut mold | 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。 Extracting the products with snap joints，moving it according to axis setting after taking the products．The products can be extracted after unlocking the joints． |
|  | 顶针联动 Ejector link | 抓取到产品后，通过与注籁机的顶针联动取出产品。 <br> Product extraction is performed connecting with the ejector of $\operatorname{IMM}$ ． |
|  | 顶针后退联动 Ejector return link | 抓取住产品后，通过注㘹机的顶针联动，取出产品。 The ejector of IMM is interlocked after holding a product． |
|  | 水口模内开放 <br> Runner release within mold | 产品或水口从模具上到离后，需要直接在模内开放时选逝择此功能。 <br> Used to release products or runners within mold after pulling them out of the mold． |
|  | 前后自由伺服点 Crosswise Free Servo point | 在产品夹取位置限制前后轴的何服马达扭矩，防止对手臂嘀加负荷时造成损伤。 <br> The torque of the servo motor of an anteroposterior axis is restricted in a product chuck position．The damage to when load is added to an arm is prevented． |
| 圭 | 走行途中姿势 <br> Posture control during traverse | 在走行途中与姿势动作，走行复旧开始同时进行姿势复位，可缩短全周期。 <br> All the cycles can also be shorten by carrying out traverse return and posture return together after products were released during traverse action． |
|  | 浇口途中开放（走行，复归） <br> Midway runner release（Move－Revert） | 浇口往返走行途中进行开放动作。 <br> Runner is released during traverse or return motion |
|  | 不良品排出 Defective product reject | 与注蘖机发出的不良品信号联动，进行不良品排出动作。 <br> Defective products are separated from other products interlocked with the defect signal of IMM． |
|  | 初期不良品排出 Initial defective product reject |  <br> Ejects only the number of extracted products and sprues preset with the counter to the ejection position after the start <br> of automatic operations when fauty products exist ffter the continuation of molding following the replacement of the <br> metal mold or material．Normal operations are then performed after this |
|  | 横走行待机 Delayed traverse | 如果模具上方有障理物，机械手或者夹具在模具没有完全打开的情况下有干涉时，机珹手可以在模具外等待模具完全打开后走行复19。 Make the unloader stand by out of the molding machine＇s door if there are obstacles in the mold moving section． |
| 落 <br> 侧 | 落下侧下降途中姿势 Posture midway descent at release side | 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。 Operation of posture reversal is carried out in the middle of downward of product opening．Return operation of posture reversal is performed in the middle of a rise． |
|  | 装箱点 <br> Point packaging | 与输送带或排列机等装管没备联动，进行产品的装䈌动作。（各轴256点） Packaging operation carried out by linking with packaging device of conveyer or of pallet changer．（Max 256 points） |
|  | 自由装箱点（ 8 级，共 1024 点） Point free packaging（ 8 stage， 1024 points ） | 设定从注對机中取出的产品的随机开放顺序。 <br> Set the order to randomly release the products extracted form the molder． |
|  | 输送带启动信号 Start singal of conveyor | 产品开放完毕后，启动输送带动作信号。 <br> After opening a product wide，the signal of a conveyor start is taken out． |
| $\stackrel{\text { \％}}{\text { \％}}$ | 3国语言切换（简体中文，日文，英文） <br> Three language exchange（Chinese（new），Japanese， English） | 操作亚的显示画面可切换了国语言。日语•英语：汉语（筬体字）为基本的切换语言。 <br> Language switching between three languages can be used for display．Basically used languages are Japanese，English， and Chinese（new character format） |
|  | 插入式用户编程 <br> Easy NC steps（USER PROGRAm EDITING） | $N C$ 步进程序的简易设定功能。在步进操作中可指定插入位置。 <br> Features the simple NC step program settings．This makes it possible to designate positions for interruptions in mold changing operations． |
|  | 操作盒内置存储记忆 External storage memory | 换模信息（最大999套保存在Micro SD卡。 <br> Recordable step changes（Max 999 molds）．A memory is carried out to Micro SD card． |
|  | 设定值隐藏功能 Default blind feature | 通过隐藏功能只显示需要的轴点时间等，能够缩旋设定时间，提高作业效率。 <br> The teaching time is reduced by the default blind feature that enables only axis point，timer，etc，required for actions to display．The operation efficiency is improved． |
|  | 伺服休眠 Servo sleep feature | 在超过设定时间后的待机中，关闭马达电源。 Motor power is turned off after the set time |
|  | 背景灯自动OFF Backlight Auto OFF | 超过湿示OFF时间设定的时间如果不操作操作會，背景灯则关闭。 <br> The backlight goes out if no pendant operation is performed for the period set with the［DISPLAY OFF TIME］function． |
|  | （部分）集中给油（分流器）（＊仅ESW－2000III机种） Centralized Lubrication system（Maniflod）（Only For ESW－2000III） | 定䐓给导轨的滑块部位做给油保养时，可以在取出侧对各轴警的滑块补充黄油缩短给油作业的时誡和移动距离。 Greasing for parts of slider of the guide regularly，it can be added butter to the slider of each axis on the extraction side． Shorten the time and distance of greasing． |
|  | 何服监视（波形监视） <br> Servo monitor（Wave shape monitor） | 可以通过操作盒监视各轴的速度，电流等数据及波形信息。 Monitor the speed of each axis，current and wave shape informations by pendant． |

选项功能 OPTION FUNCTIONS

## 姿势•旋转轴NC

Posture \＆rotation NC
装各佝服马达驱动的姿势轴和旋转轴，在执行夹取，恶切，装箱，嵌件等动作时，可以自由设定位置。
AC servo motor which are euqipped in posture and rotation axes．
It can set the position freely
It can set the position freely as extraction，gate cutting，packaging
or insert motion．


## 姿势轴NC

Posture NC
窃势䧴使用伺服马达替换传统的气缸驱动，可以自由设定姿势轴的动作 Servo
Syrino motor are used on the posture axes instead of traditional
cyinder driving．It can set the motion position of posture freely


## CNC编程功能

CNC program editing function
可以简单自由的编宣自动运转程序。
Can be created easily the NC program freely．


选项清单｜OPTION LIST

|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  | 8020－01 | 吸着确认单元（2回路） <br> Vacuum confrimation unit（2circuits） | 使用真空发生单元2回路取出产品。 <br> Products are extracted with vacuum generator（tacovam） 2 circuits． |
|  | 8020－02 | 吸着确认单元（4回路） Vacuum confrmation unit（Acircuits） | 使用真空发生单元4回路取出产品。 <br> Products are extracted with vacuum generator（tacovam） 4 circuits． |
|  | 0081－01 | 夹具減压闻 <br> Chuck pressure regulator | 调整夹具的抓取力。 <br> Adjust the gripping force of the chuck． |
|  | 0025－01～04 | 旋转功能 Rotation Unit | 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。 Used to prevent product from hitting the robot in the mold， within the mold or on the release side by rotating the chuck plate． |
|  | 0055－01 | 上升途中闭模 <br> Mold close during arm ascent | 模内上升途中，使注埕机开始闭模缩短开模时间，提高周期的仕样。 Used to shorten the molding time by starting the mold closing on the way to ascent． |
|  | 0087－02 | 制品确认（LS－4） Product confirmation LS－4 | 上升途中安装限位开关，检知产品。 Detects the product mounting the limit switch in the middle rise |
|  | 0014－07 | 固定可动切换 Extraction from fixed mold | 可自由选择从模具的固定侧或可动似取出产品。 It can be selected to take the products from fixed or moving side of mold． |
|  | 0008－01 | 剪切回路（夹具内） Air nipper in chuck circuit | 使用夹具内气剪（1回路）剪切水口的时候，需要此仕样。 <br> 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。 <br> Used to take the cutting of direct gates or side gates with the air nipper in the chuck plate． <br> When in automatic operation，cutting is made at product release position before the product release |
|  | 0001－02 | 制品 2 点开放 <br> Release product at two different points | 在两处进行制品开放动作。产品夹取变为 2 回路。 <br> Two different products are extracted and released to different positions on the release side． Two circuits are required for the chucking． |
|  | 0001－03 | 制品4点开放 <br> Release product at four different points | 在四处进行制品开放动作。产品夹取变为 4 回路。 <br> Four different products are extracted and released to different positions on the release side． Four circuits are required for the chucking． |
|  | 0009－01 | $N T$ 剪切－可动侧（有单元） <br> NT gate cutting on crossmember of moving mold side（w／unit） | 以处理产品水口为目的，在落下侧的走行导轨端安装NT单元气煎，切断水口。 <br> For purposes of product gate processing，the air nipper in the NT unit mounted at the end of the release－side traverse rail is used to cut gates at 2 points． |
| 㐞 | 0024－01 | 警报灯（红色•无靽鸣器） Alarm Lamp（Red color，w／o buzzer） | 机械手发生警报（异常）时，警报灯兑。 <br> 因机种不同，警报灯的安装位置也有所不同。需确认。 <br> The alarm lamp is switched on a light when there is a alarm（error）in the robot． <br> Mounting positions are different with robots． |
|  | 8003－01 | 自动快速交换用夹具（气压式） <br> Quick chuck change automatic（air sw） | 可炔速装卸夹具。 <br> One－touch simple mating／demating of chuck plate． |
|  | 0005－11 | 操作盒支架 Pendant stand | 操作亚专用支架。 Stand of operation pendant only． |
|  | 0063－02 | 欧规 12 EUROMAP 12 | 欧规 12 EUROMAP 12 Specification |
|  | 0063－03 | 欧规 67 EUROMAP 67 | 欧规 67 EUROMAP 67 Specification |






基本参数 \｜COMMON SPECIFICATIONS


外形尺寸 \｜OUTER DIMENSIONS


