

Booth

**3.1 F21**

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SHOW GUIDE



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# 共塑美好未來

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# iMF4.0

## 智慧製造工廠

### Intelligent ManuFactory

#### ► 系統說明

##### 生產穩定

注塑機可自動調整，適應成型條件的輕微變異。

##### 生產優化

運用製程感知技術，提升良率與品質，降低浪費。

##### 智慧製造

注塑機與周邊互聯信息，自主調適及控制質量參數。

##### 智慧服務

使用智慧監控&遠程維護，預先報警、事前養護，減少意外停機。





## ► System Introduction

### Stabilization

The IMM has adaptive control to meet the slight fluctuations of molding condition.

### Optimization

Applying process quality sensor monitoring to improve the yield and reduce waste.

### Automation

The IMM and peripherals communicate with each other to autonomously control the process quality.

### Intellectualization

Using smart and remote monitoring to plan maintenance in advance, and reduce unexpected downtime.

## 智慧管理

Smart Management

## 智慧製造

Smart Manufacture

### 判別良窳

Distinguish  
good or bad

### 促進良率

Improve rate  
of production

### 增進效率

Improve  
Effectiveness



## ▶ FA-160

### 新一代高效節能注塑機 Advanced Servo Hydraulic IMM

#### 規格 Specification

|      |                 |              |
|------|-----------------|--------------|
| 機器型號 | Machine Model   | FA-160       |
| 鎖模力  | Clamping Force  | 160 tonf     |
| 螺桿直徑 | Screw Diameter  | 45 mm        |
| 射出速度 | Injection Speed | 120 mm/sec   |
| 大柱內距 | Tie Bar Spacing | 470 x 470 mm |

#### 特點 Feature

- 射速提升20%以上，並採射出線軌與座進前拉設計，注塑同步且穩定。
- 車壁結構強度提升30%，開關模運動平滑控制優化，成型穩定並延長設備壽命。
- 高效能伺服節能油泵達GB一級節能驗證，系統壓力提升至160 bar。
- The injection speed is increased by more than 20%; the linear guide and forward pull design are adopted for injection carriage to improve the synchronism and stability.
- Strength of the platen design reinforced by 30%, and the closing-opening smoothness control optimized makes molding stable and machine lifetime extended.
- The high-performance servo energy-saving oil pump achieves GB first-class verification, and the system pressure is enhanced to 160 bar.

#### 系統搭載 System Equipped (optional)

**iMF4.0** 智慧製造工廠 *Intelligent ManuFactory*

大柱鎖模力監視系統 Tie bar clamping force monitor system

熔體變異適應控制 Adaptive control technology for viscosity variation inhibition of melt

模具冷卻流量與溫度監視系統 Mold cooling flow and temperature monitoring system

模穴壓力感測監視系統 Cavity Pressure Monitoring System

# 新世代智慧成型系統

## New Generation Molding System



### ▶ 產品 Product

|       |            |                  |              |
|-------|------------|------------------|--------------|
| 名 稱   | Part       | 多功能收納盒           | Stacking Bin |
| 尺 寸   | Size       | 145 x 95 x 63 mm |              |
| 厚 度   | Thickness  | 1.5 mm           |              |
| 重 量   | Weight     | 45g / pcs        |              |
| 模 穴 數 | Cavities   | 2                |              |
| 原 料   | Material   | PP               |              |
| 成型時間  | Cycle Time | 15 sec           |              |

### ▶ 合作夥伴 Project Partners

|       |                  |           |                                                                                                  |
|-------|------------------|-----------|--------------------------------------------------------------------------------------------------|
| 模 具   | Mold Supplier    | 金 億 唐     |  CYT        |
| 熱 澆 道 | Hot Runner       | 契 益       |  MoldPower  |
| 機 械 手 | Robot System     | S E P R O |  SEPRO 中国   |
| 原 料   | Material         | 中 國 石 化   |  SINOPEC    |
| 色 母   | Master Batch     | 原 紳       |  YUANG SHEN |
| 輸 送 帶 | Conveyer Belt    |           |                                                                                                  |
| 供料系統  | Material Feeding | 信 易       |  SHINI      |
| 冷 凍 機 | Chiller          |           |                                                                                                  |
|       |                  | 雙 葉       |  Futaba     |
| 感 測 器 | Sensor           | 科 材       |  SENSORMATE |
|       |                  | 勝 維       | SHENG WAI                                                                                        |





## ▶ **FB-280R**

### 雙伺服節能多組分注塑機

Servo Power-Saving Multi-Component **IMM**

#### 規格 Specification

|        |                       |              |
|--------|-----------------------|--------------|
| 機器型號   | Machine Model         | FB-280R      |
| 鎖模力    | Clamping Force        | 280 tonf     |
| 螺桿直徑   | Screw Diameter        | 36mm / 28mm  |
| 大柱內距   | Tie Bar Spacing       | 950 x 540 mm |
| 轉盤容模直徑 | Rotary Table Diameter | 1050 mm      |

#### 特點 Feature

- 由伺服電機控制轉盤動作，轉動時間可縮短50%以上，速度切換更平穩，定位更精準。
- 高效節能雙伺服動力系統，符合國家一級節能標準。(≤0.40kw h/kg)
- 專利轉盤定位夾具，定位精準，確保模具壽命。
- Rotary table controlled by servo motor could shorten rotary time by more than 50%, with more stable rotary speed switch and more precise positioning.
- Adopting high efficiency double servo power system which is certified the first grade of national power saving standard (≤0.40kw h/kg).
- With accurate rotary positioning clamber, it protects the mold.

#### 系統搭載 System Equipped (optional)

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# 醫療包裝多組分成型系統

## 2K Medical Packing Molding System



### ▶ 產品 Product

|      |            |            |              |
|------|------------|------------|--------------|
| 名稱   | Part       | 輸液蓋        | Infusion Cap |
| 尺寸   | Size       | Ø 39 mm    |              |
| 重量   | Weight     | 4.2g / pcs |              |
| 模穴數  | Cavities   | 24 + 24    |              |
| 原料   | Material   | PP + TPE   |              |
| 成型時間 | Cycle Time | 22 sec     |              |

### ▶ 合作夥伴 Project Partners

|       |                  |      |                                                                                                 |
|-------|------------------|------|-------------------------------------------------------------------------------------------------|
| 模具    | Mold Supplier    | 博來盛  |            |
| 熱澆道   | Hot Runner       |      |                                                                                                 |
| 原料    | Material         | 中國石化 |  SINOPEC   |
|       |                  | 泰瑞豐  |  TERRIFIC  |
| 供料系統  | Material Feeding |      |                                                                                                 |
| 冷凍機   | Chiller          | 信易   |            |
| 模具監視器 | Sensor           | 博視源  |  BoShiYuan |



## ► FB-280T

### 轉軸式多組分注塑機

### Rotary Shaft Two-Component IMM

#### 規格 Specification

|      |                 |                    |
|------|-----------------|--------------------|
| 機器型號 | Machine Model   | FB-280T            |
| 鎖模力  | Clamping Force  | 280 tonf           |
| 螺桿直徑 | Screw Diameter  | 26mm / 32mm / 26mm |
| 射出速度 | Injection Speed | 120 mm/sec         |
| 大柱內距 | Tie Bar Spacing | 950 x 540 mm       |

#### 特點 Feature

- 伺服電動轉軸，提升轉軸速度及精度。
- 注塑單元配置三支獨立料管組，及三組射出閉迴路，提升射出精度。
- 可依據產品需求，支援先頂出後旋轉模具，或先旋轉模具再頂出之彈性操作。
- Adopting servo electric rotary shaft which improves the speed and precision.
- The injection unit is equipped 3 independent barrel sets and 3 sets of close-loop control, which enhance the injection precision.
- According to the request of product, the machine could be choosed to do ejection then rotation or do rotation and then ejection.

#### 系統搭載 System Equipped (optional)

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## 三色轉軸多組分成型系統

### Triple-color/component Molding System



#### ▶ 產品 Product

|      |            |                   |                         |
|------|------------|-------------------|-------------------------|
| 名稱   | Part       | 三色牙刷柄             | 3-color toothbrush grip |
| 尺寸   | Size       | 190 x 10 mm       |                         |
| 厚度   | Thickness  | 6 mm              |                         |
| 重量   | Weight     | 15.7g / pcs       |                         |
| 模穴數  | Cavities   | 4 + 4             |                         |
| 原料   | Material   | PCTA + PCTA + TPE |                         |
| 成型時間 | Cycle Time | 55 sec            |                         |

#### ▶ 合作夥伴 Project Partners

|       |                        |     |                                 |
|-------|------------------------|-----|---------------------------------|
| 模具    | Mold Supplier          | 精誠  | DIRECTO™                        |
| 熱澆道   | Hot Runner             |     | Kynventive<br>molding solutions |
| 感測器   | Sensor                 | 聖萬提 | THERMOPLAY                      |
| 模溫機   | Temperature Controller |     | PRIAMUS<br>GAMMAFLUX            |
| 自動化設備 | Automation             | 超群  | PML                             |
| 輸送帶   | Conveyer Belt          |     |                                 |
| 供料系統  | Material Feeding       | 信易  | SHINI                           |
| 冷凍機   | Chiller                |     |                                 |



## ▶ HN-280p

### 高性能精密節能注塑機

### High Performance Energy-Saving IMM

#### 規格 Specification

|      |                 |              |
|------|-----------------|--------------|
| 機器型號 | Machine Model   | HN-280p      |
| 鎖模力  | Clamping Force  | 280 tonf     |
| 螺桿直徑 | Screw Diameter  | 50 mm        |
| 射出速度 | Injection Speed | 229 mm/sec   |
| 大柱內距 | Tie Bar Spacing | 610 × 610 mm |

#### 特點 Feature

- 高剛性夾模機構，確保機台穩定性。
- 高響應伺服動力系統，提高機台應答性。
- 伺服電動加料，實現邊加料邊開模，定位精準且節省能源。
- 配置德國Rexroth閉迴路伺服閥，高精度且高重現性。
- High rigidity clamping mechanism ensures the stability of the machine base.
- High-response servo power system improves the machine response.
- Servo electric charging works together with mold opening, which makes precise positioning and energy saving.
- Adopting Rexroth closed-loop servo valve to achieve high repeating precision.

#### 系統搭載 System Equipped (optional)

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# 模內貼標生產系統

## In Mold Labeling Turnkey Solution



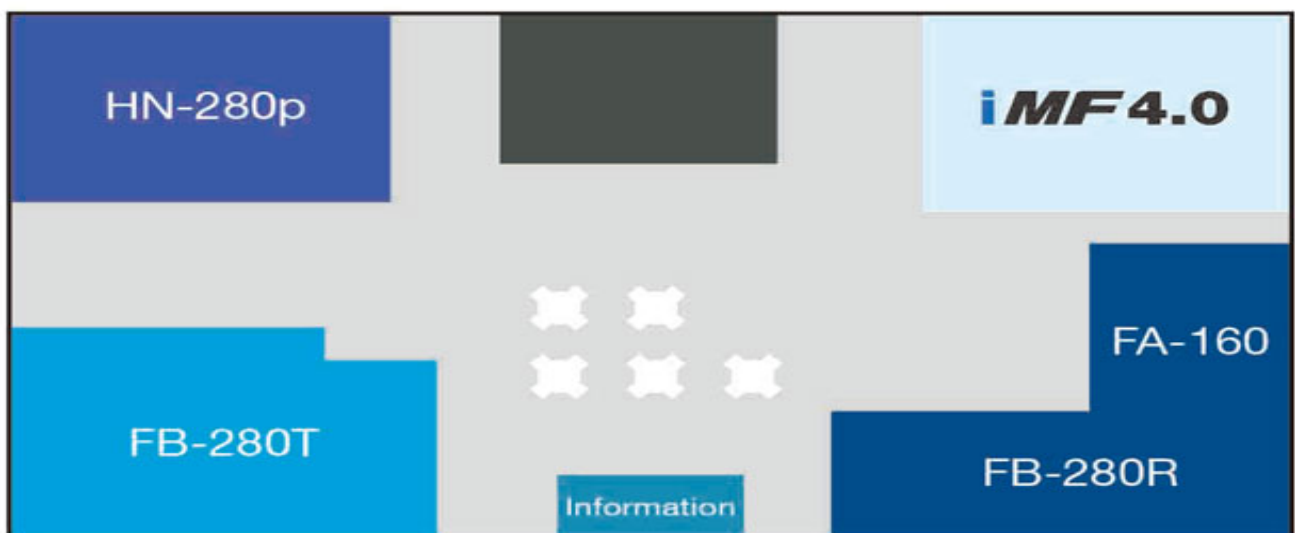
### ▶ 產品 Product

|      |            |          |            |
|------|------------|----------|------------|
| 名稱   | Part       | 酸奶杯      | Yogurt Cup |
| 容量   | Volume     | 100 ml   |            |
| 厚度   | Thickness  | 0.5 mm   |            |
| 重量   | Weight     | 8g / pcs |            |
| 模穴數  | Cavities   | 8        |            |
| 原料   | Material   | PP       |            |
| 成型時間 | Cycle Time | 5 sec    |            |

### ▶ 合作夥伴 Project Partners

|       |                  |     |                                                                                             |
|-------|------------------|-----|---------------------------------------------------------------------------------------------|
| 模具    | Mold Supplier    | 博來盛 |        |
| 熱澆道   | Hot Runner       |     |                                                                                             |
| 原料    | Material         | 博祿  |        |
| 標籤    | Label            | 卡樂  |  KAILE |
| 自動化設備 | Automation       | 景華  |  GECH  |
| 供料系統  | Material Feeding |     |                                                                                             |
| 計量色母機 | Volumetric Doser | 信易  |        |
| 冷凍機   | Chiller          |     |                                                                                             |

# 攤位平面圖 Booth Layout

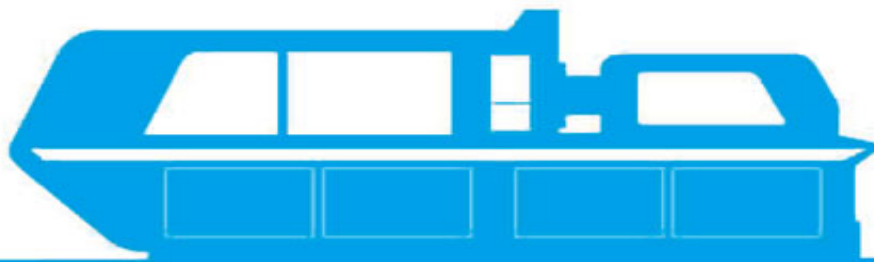


► Booth **3.1 F21**



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Multi-Component IMM—Since 1984



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### 富强鑫精密工業股份有限公司

**Fu Chun Shin Machinery Manufacture Co., Ltd.**

71841 臺灣台南市關廟區埤頭里保東路269號

No.269, Baodong Road, Pitou Village, Guanmiao District,  
Tainan City 71841, Taiwan

TEL: +886-6-5950688 • FAX: +886-6-5951129

E-mail: fcsco@fcs.com.tw

### 東莞富强鑫塑膠機械製造有限公司

**Dongguan Fu Chun Shin Plastic Machinery Manufacture Co., Ltd.**

中國廣東省東莞市大朗鎮石廈管理區金廈東路18號 郵編：523792

No.18, Jinsha East Road, Shixia Administration District, Dalang Town,  
Dongguan City 523792, Guangdong Province, China

TEL: +86-769-83313753 • FAX: +86-769-83181903

E-mail: cdg@fcs.com.tw

### 富强鑫(寧波)機器製造有限公司

**Fu Chun Shin (Ningbo) Machinery Manufacture Co., Ltd.**

中國浙江省寧波市江北區海川路115號 郵編：315032

No.115, Haichuan Road, Jiangbei District, Ningbo City 315032,  
Zhejiang Province, China

TEL: +86-574-56138688 • FAX: +86-574-56138600

E-mail: cnb@fcs.com.tw

