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SHOW GUIDE

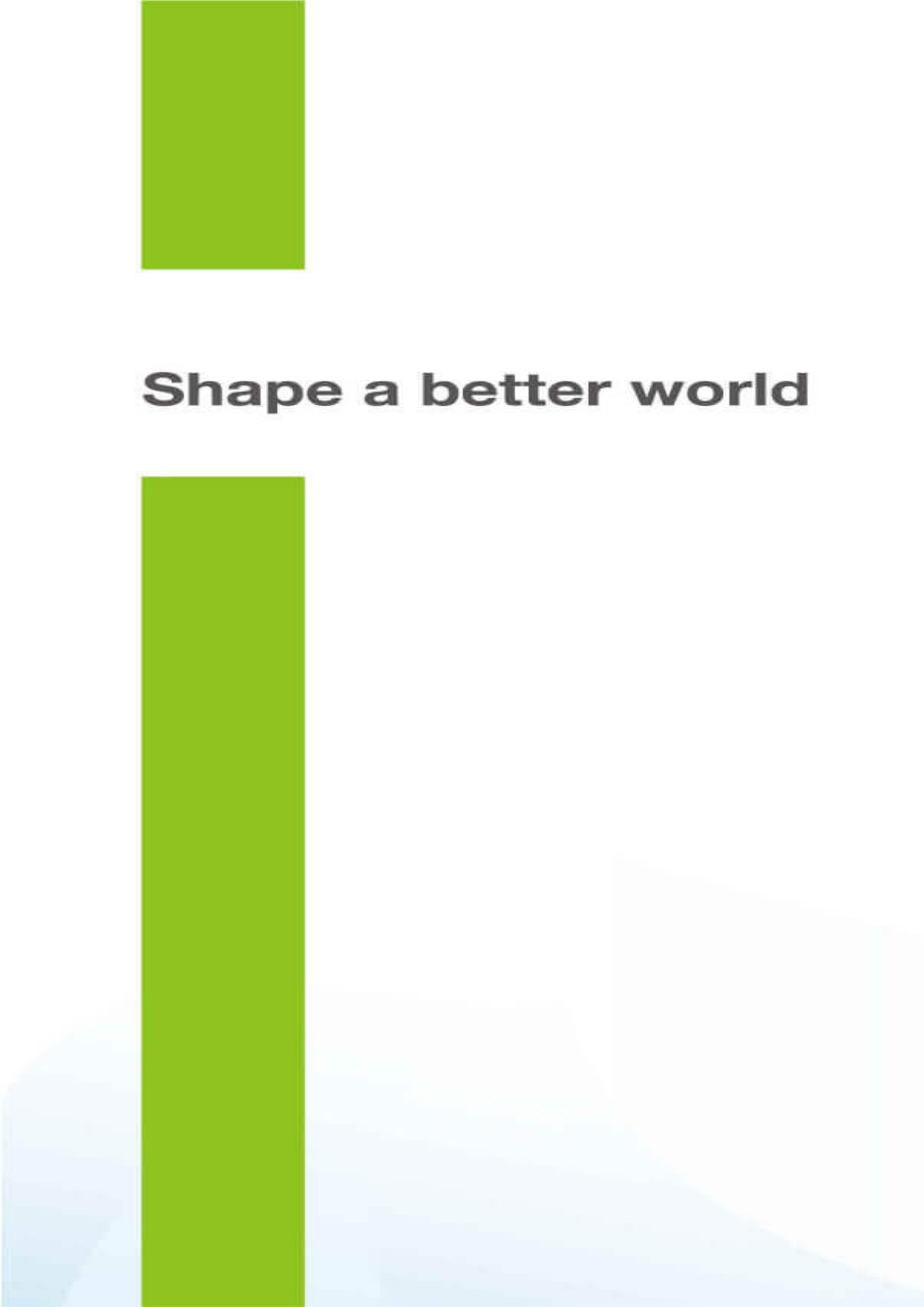
TAIPEI PLAS 2022

SEP 27- OCT 01, 2022

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Shape a better world



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iMF4.0

智慧製造工廠

Intelligent ManuFactory

智慧塑機 Smart Machine

運用外加感測器，掌握因環境、塑料、設備磨耗的微量變異，提升射出機自適應調控能力。

Applying additional sensors to monitor and meet the slight fluctuations caused by the environment, material, or machine abrasion, and to improve the adaptive control of injection molding machines.

智慧周邊 Smart Auxiliary

透過標準通訊協定，達到設備運轉、互聯及調控之目的。

The IMM and auxiliaries could operate, communicate with each other through the standard communication protocol, to be adjusted and controlled.



智慧製造 Smart Manufacturing

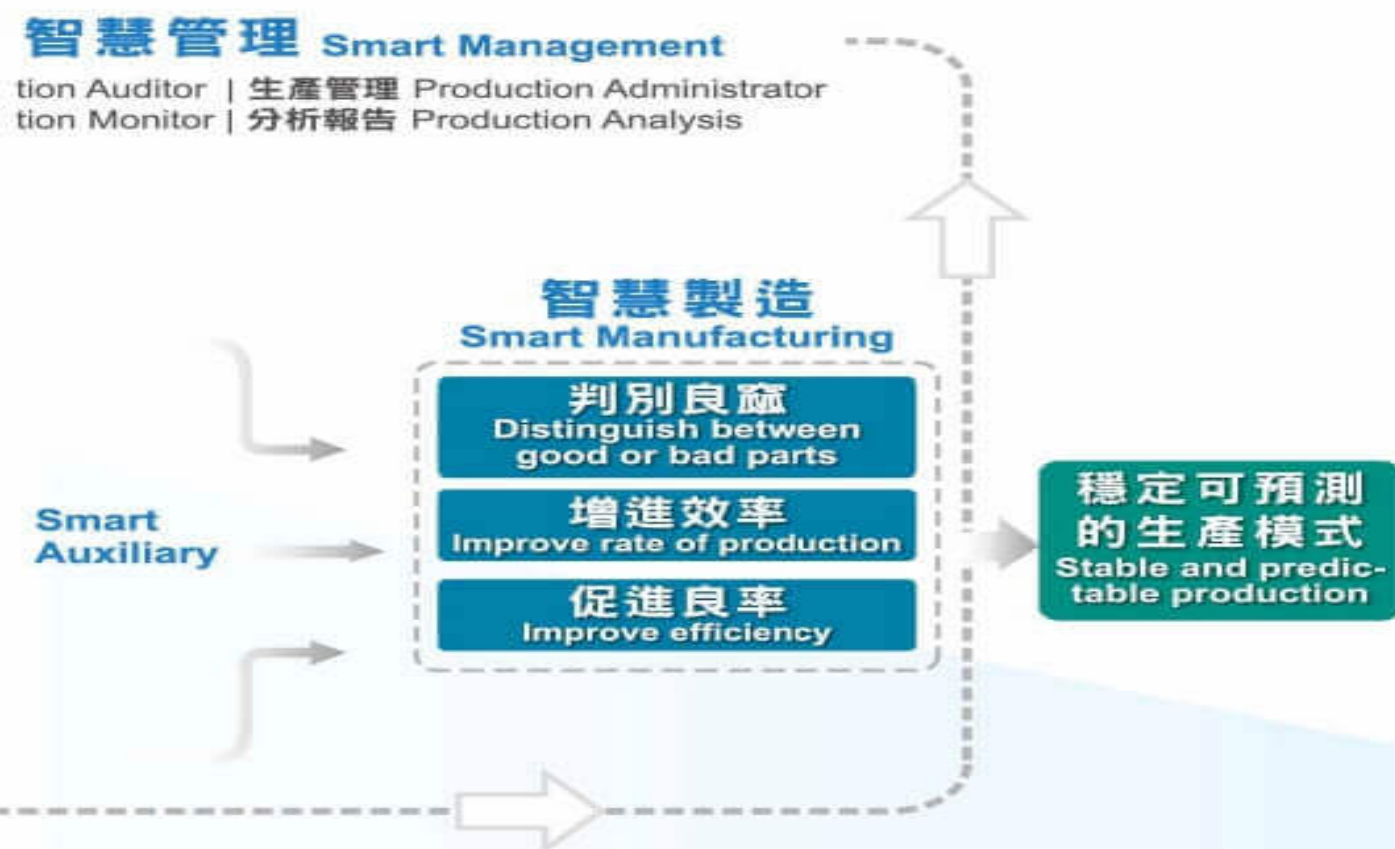
由熔體變異或模穴壓力感測，即時線上監控品質，並搭配機械手臂檢出不良品，有效降低品檢人力。

Real-time online quality monitoring through the sensors of viscosity variation of melt, or cavity pressure, and detecting the defectives with automations, to effectively reduce the inspection manpower.

智慧管理 Smart Management

透過智慧管理系統收集關鍵熔體變異數據。

Using intelligent managing system to collect the key data of viscosity variation of melt.





CT-230R

全電式多組分射出機 All-Electric Two-Component IMM

機台規格 Specification

機器型號	Machine Model	CT-230R
鎖模力	Clamping Force	230 tonf
螺桿直徑	Screw Diameter	40 mm / 30 mm
射出速度	Injection Speed	300 mm/sec
大柱內距	Tie Bar Spacing	960x680 mm
轉盤容模直徑	Rotary Table Diameter	1218 mm

特點 Feature

- 射出/儲料採用伺服馬達，兩組或多組獨立料管組同步射出，大幅縮短成型週期。
- 伺服轉盤速度提升30%-50%，定位系統之精度達0.005°。
- 射座採線軌使加料基礎背壓趨近0，有效減少射嘴或熱流道熔膠溢流。
- 歐洲頂級伺服驅動系統及控制器，射出控制精度達0.01mm。
- Adopting servo motor and multiple independent barrels for injection, greatly shortens the cycle time.
- The rate of servo rotary table improved by 30%-50%, and the positioning precision up to 0.005°.
- Linear guide at injection unit makes back pressure approach 0 when charging, reduces the melt overflow.
- European servo driver and controller system make injection accuracy up to 0.01mm.

系統搭載 System Equipped (optional)

iMF4.0 智慧製造工廠 *Intelligent ManuFactory*
模穴壓力監視系統 Cavity pressure monitor system

雙色包裝容器成型系統

2K Packaging Molding System



產品 Product

名稱	Part	保鮮盒	Airtight Container
尺寸	Size	盒身	Box 152.8 x 152.8 x 56 mm
		蓋子	Cover 197.6 x 197.6 x 11.2 mm
容量	Volume		680 ml
厚度	Thickness		平均 1 mm、最薄 0.3 mm
重量	Weight	盒身	Box 42 g、蓋子
		Cover	51 g
模穴數	Cavities		1 + 1
原料	Material		PP (8681) + TPE (642)
成型時間	Cycle Time		30 sec

合作夥伴 Project Partners

模具	Mold Supplier	南楓	 南楓 NAN FONG
熱澆道	Hot Runner		
塑料	Plastic Material	李長榮 (PP)	 LCY
		和泰 (TPE)	 EMPILON [®] Thermoplastic Elastomer Professional
機械手	Robot System	金爪	 TENSO
色母	Master Batch	原紳	 YUANG SHEN
供料系統	Material Feeding	晏邦	 晏邦電機 YANN BANG
冷凍機	Chiller	玉鼎	 YUTING
輸送帶	Conveyer Belt	麗鯨	 LI JUNG
感測器	Sensor	FUTABA	 Futaba



FA-160e

電動化高效節能射出機 Advanced Servo Hydraulic IMM With Electric-Driven Injection Unit

機台規格 Specification

機器型號	Machine Model	FA-160e
鎖模力	Clamping Force	160 tonf
螺桿直徑	Screw Diameter	40 mm
射出速度	Injection Speed	300 mm/sec
大柱內距	Tie Bar Spacing	470x470 mm

特點 Feature

- 射出單元以伺服系統驅動，控制精準動作順暢。
- 射座線性滑軌，負荷輕、減少磨耗，射出控制精準穩定。
- 伺服射出全閉迴路，精準控制每模射速，射出時間穩定性 >99.9%，成型品重量穩定性佳。
- 模盤剛性提升30%，變形量更低，提升模具使用壽命。
- Injection unit is driven by servo motor system for accurate control and smooth motion.
- Linear guide for injection carriage could lower the wear and tear, and make the injection control precise and stable.
- Servo injection closed-loop system could accurately control the speed of each shot, the injection time stability is >99.9% and with stable molding product weight.
- Platen strength improvement that increase rigidity by 30%, lower deformation of mold plate, and improve the mold lifetime.

系統搭載 System Equipped (optional)

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

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

智慧預警醫療成型系統

Smart Medical Molding System



產品 Product

名稱	Part	醫療針筒	Medical Syringe
尺寸	Size	Ø 77 x 12.8 mm	
容量	Volume	5 ml	
厚度	Thickness	0.65 mm	
重量	Weight	2 g / pcs	
模穴數	Cavities	24	
原料	Material	PP (K4650)	
成型時間	Cycle Time	9 sec	

合作夥伴 Project Partners

模具	Mold Supplier	富強鑫	
熱澆道	Hot Runner		

塑料	Plastic Material	台化		FCFC
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機械手	Robot System	威得客	
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供料系統	Material Feeding	信易	
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冷凍機	Chiller	玉鼎	
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輸送帶	Conveyer Belt	麗鯨		LI JUNG
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感測器	Sensor	勝維	SHENG WAI
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LM-500

二板式精密射出機 Two-Platen IMM

機台規格 Specification

機器型號	Machine Model	LM-500
鎖模力	Clamping Force	500 tonf
螺桿直徑	Screw Diameter	85 mm
射出速度	Injection Speed	123 mm/sec
模壁最大間距	Daylight	1650 mm
大柱內距	Tie Bar Spacing	910 x 810 mm

特點 Feature

- 鎖模機構短，可節省30%廠房空間；且調模快速，僅需5-10秒。
- 射出期間加壓缸持續提供補壓，使鎖模力精確，達到誤差值 $\pm 1\%$ 內。
- 鎖模系統無肘節磨耗問題，故可減少潤滑需求與維護成本。
- Two-platen structure has shorter clamping unit which saves the footprint up to 30%, and mold-adjusting only takes 5-10 seconds.
- During the injection, the pressurizing cylinder continues to provide compensating pressure, so that the clamping force is accurate, the error value is within $\pm 1\%$.
- Clamping unit without toggle structure which reduces lubrication and maintenance cost.

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

循環再生家居成型應用

Recycled Molding Application



產品 Product

名稱	Part	手提工具盒	Utility Caddy
尺寸	Size	376 x 275 x 108 mm	
厚度	Thickness	1.8 ~ 2 mm	
重量	Weight	450 g	
模穴數	Cavities	1	
原料	Material	PP (3204)	
成型時間	Cycle Time	40 sec	

合作夥伴 Project Partners

模具	Mold Supplier	聯府	KEYWAY
熱澆道	Hot Runner	科祐	INCAND
塑料	Plastic Material	台化	FCFC
機械手	Robot System	金爪	ATENSO
色母	Master Batch	原紳	YS YUANG SHEN
供料系統	Material Feeding	信易	SHINI
冷凍機	Chiller	玉鼎	YUTING
輸送帶	Conveyer Belt	麗鯨	LI JUNG
感測器	Sensor	科材	SENSORMATE

MuCell®

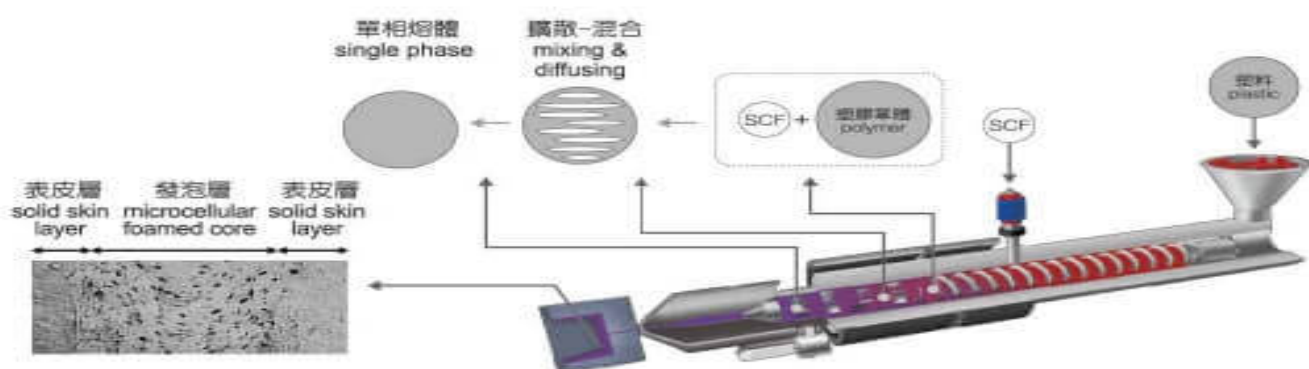
微發泡射出成型系統

Foaming Injection Molding System

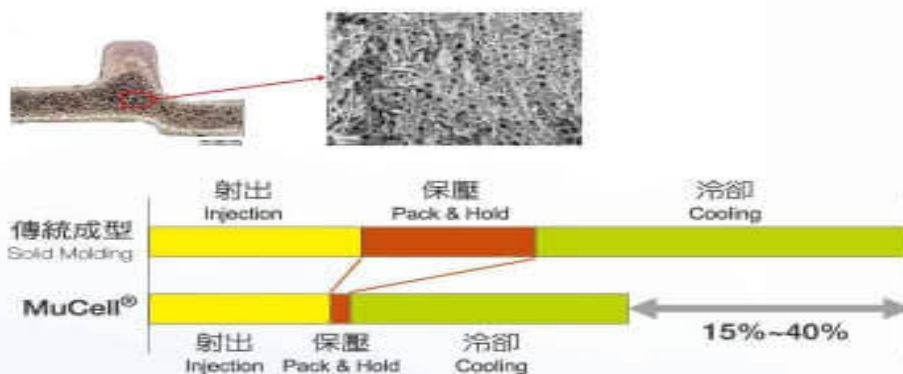
降低成本
Cost Reduction

永續性高
Sustainability

微發泡射出原理 Principals



MuCell® 應用優勢 Advantages



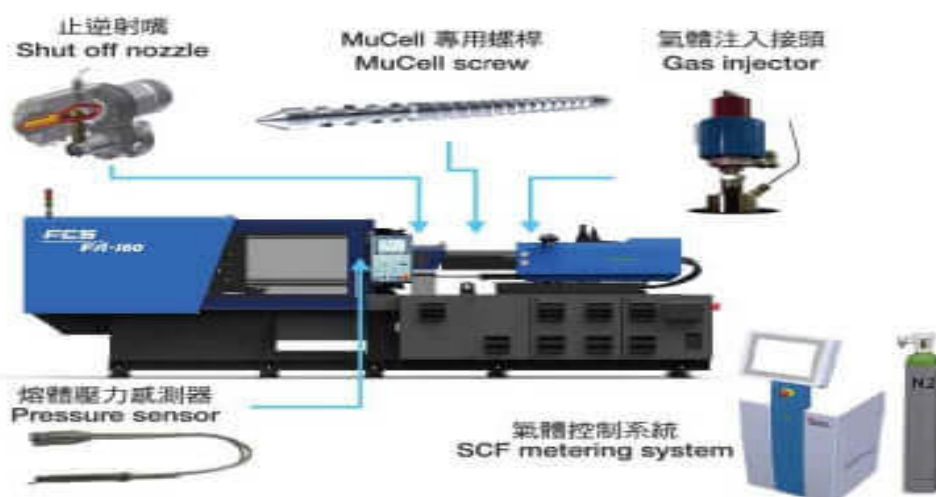
- 減重(輕量化)
Weight reduction
- 降低鎖模力需求
Machine clamping force reduction

- 縮短成型週期
Cycle time reduction
- 減少成型不良問題
Sustainably reduce warpage & dimensional defect

造型自由
Design Freedom

開發期短
Faster to market

MuCell® 製程設備 Implementation



應用實例 Application

汽車空調面板
A/C Control Bezel



棧板
Pallet



鞋底
Footwear



薄型容器
Thin Wall Container



展位平面圖

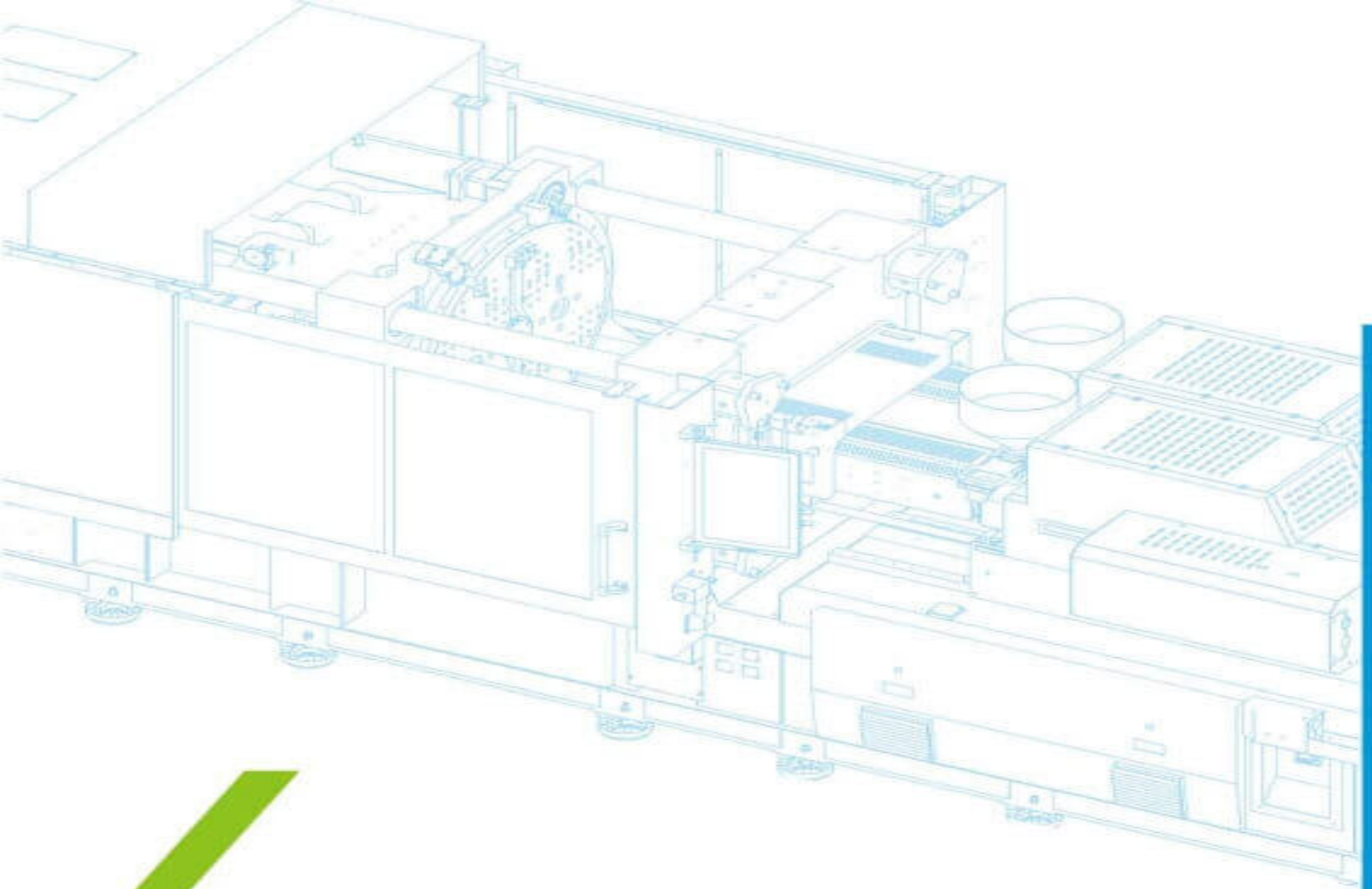
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筆記頁
Note



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