

# IML

## 模內貼標生產系統

In Mold Labeling Turnkey Solution

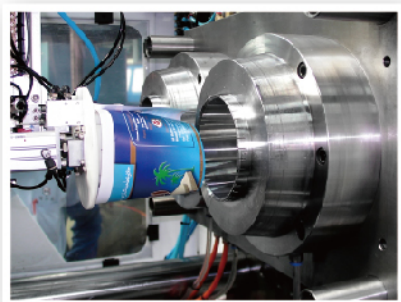
## 模內貼標生產系統 In Mold Labeling Turnkey Solution

模內貼標係一種高效率的生產技術，藉由將印製精美的標籤事先置放在模具中，並在射出時，將塑膠原料與標籤一體成型，簡化傳統複雜的二次加工製程，不僅生產效率高，產品品質佳，並能有效降低生產成本，協助做好環境保護。

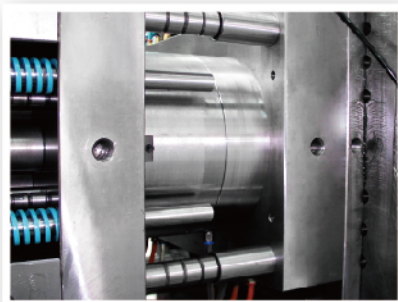
In Mold Labeling (IML) is a highly efficient technique. Performed by placing the printed label in the mold before injection and bonding the label with the plastic products during the injection process. IML can produce high quality products efficiently, cost effectively and environmentally friendly.

### 生產流程 Production Process

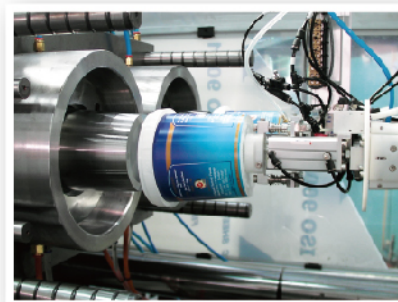
**1** 開模時置入標籤紙  
Inserting label when mold opens



**2** 關模並射出  
Mold closes and finishes injection



**3** 成型品取出  
Taking out the finished product





## 塑膠製品裝飾工藝比較 Comparisons regarding plastic product decorating techniques

項目 Feature	模內貼標 In Mold Labeling	傳統裝飾工藝 Traditional Decorating Techniques	
加工模式 Technique	一次成型 One stop molding	二次加工-印刷/轉印 Reprocess: printing / transferring	二次加工 (標籤黏合/熱收縮標籤) Reprocess: sticking label / heat shrinking label
標籤貼合性 Label Fitting	平整光滑 Completely fitted	無 N/A	容易產生綳摺或氣泡 Easy to cause bubble or wrinkles
產品美觀 Appearance	優 Excellent	較差 Worse	普通 Normal
圖案資訊防刮性 Scratch Resistance	優 Excellent	較差 Worse	普通 Normal
標籤防偽功能 Anti-counterfeit function	優，可整合RFID等特殊標籤 Excellent: can be integrated with special labels or RFID	無法提供 Unable to provide	無法提供 Unable to provide
產品環保性 Environmentally friendly	標籤與容器同材質，方便回收再利用 Label and plastic parts can be of the same material, easy to recycle	溶劑或塗料易造成污染 Solvent and paint might cause pollution	回收時需再處理 Need to reprocess before recycling
產品衛生性 Hygiene risk	一次成型污染少 Excellent due to the one step procedure	二次加工有汙染風險 Common due to reprocessing procedure	二次加工有汙染風險 Common due to reprocessing procedure
生產良率 Yield Rate	最高，99.9%以上 Highest, above 99.9%	二次加工良率較低 Low	二次加工良率較低 Low
產能 (1模4穴飲料杯為例) Capacity (4 cavities / 200 c.c. cups as example)	月產能150萬個以上 More than 1,500,000 cups / month	月產能約70萬個 About 700,000 cups/ month	月產能約35萬個 About 350,000 cups/ month



## 模內貼標生產系統 In Mold Labeling Turnkey Solution

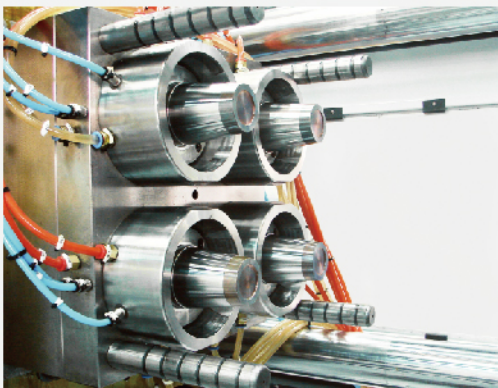


### 抽料機

- 吸取原料送至料斗。
- 可針對不同規格的生產條件選配適合的抽料機。

### Material Auto Loader with Hopper

- Suck raw material and transfer it to the hopper.
- FCS can provide a suitable material auto loader based on the customers' production requirements.

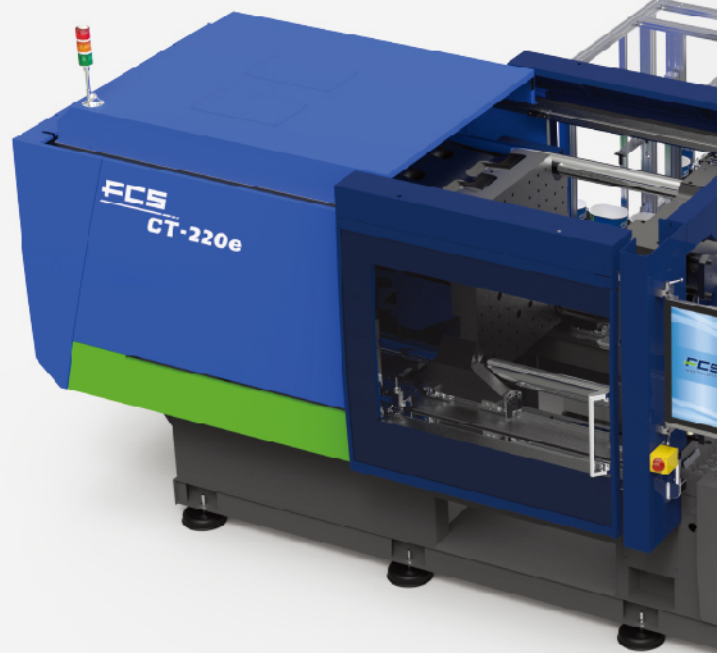


### 模具

- 採用熱澆道及專用冷卻水路設計，適合薄壁產品高速射出成型。
- 特殊真空吸標方式，結構穩定無痕跡。

### Mold

- The mold is designed for thin-wall products and a high injection speed molding procedure using hot runners and a specially designed cooling circuit.
- A vacuum label absorbing structure enables stable label feeding without leaving any marks.

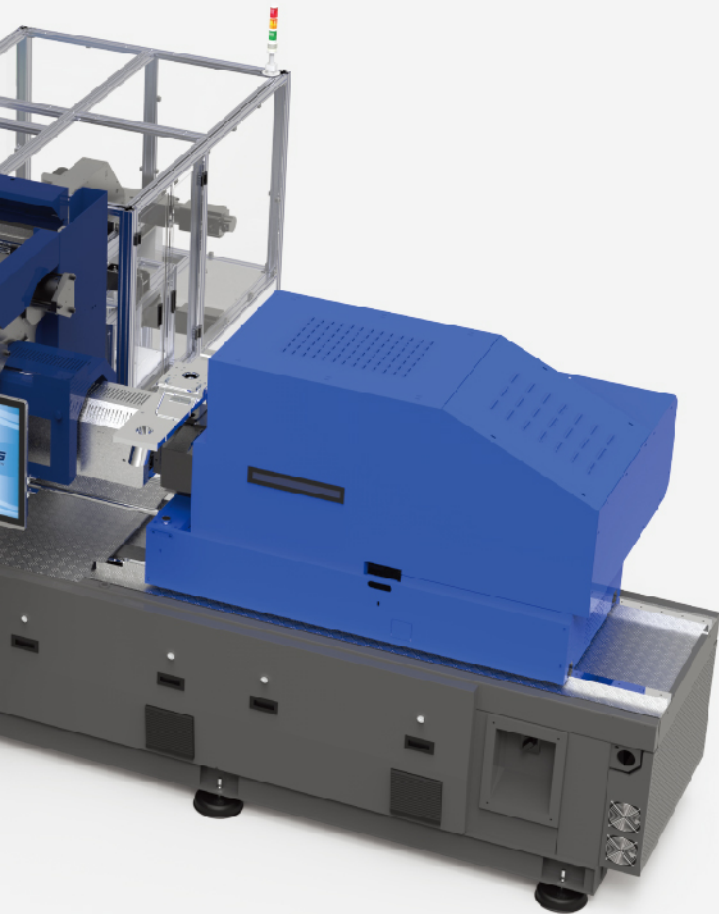


### 冰水機

- 提供快速生產的必要冷卻條件。
- 富強鑫可為不同規格的生产條件選配適合的冰水機。

### Chiller

- Provides fast cooling for the mold.
- FCS can provide a suitable chiller based on the customers' production requirements.

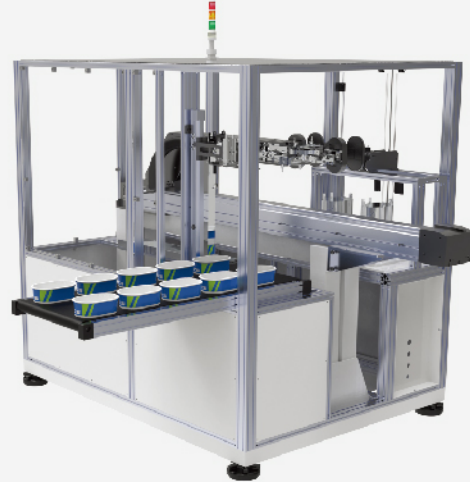


### 客製化標籤

- 可因應客戶需求，提供具防偽功能及多樣化型式設計之標籤。

### Customized Labels

- The labels can be designed with different designs, materials and anti-counterfeit features according to the customers' requirements.



### 自動供標機

- 放置標籤及取出成品，節省時間。
- 取出時成型品自動堆疊。
- 依據產品需求提供客製化設計。

### Label Feeding System

- Simultaneously place labels and take out finished products automatically to save more time.
- The finished products are automatically stacked when taken out.
- It can be customized to meet the customers' needs.



# 模內貼標生產系統 In Mold Labeling Turnkey Solution

1 掌握客戶需求  
Understand the  
Customers' Needs

2 生產線規劃  
Design the Plant Layout

3 報價&整廠規劃書  
Quotation & Proposal

4 成品設計  
Product Design

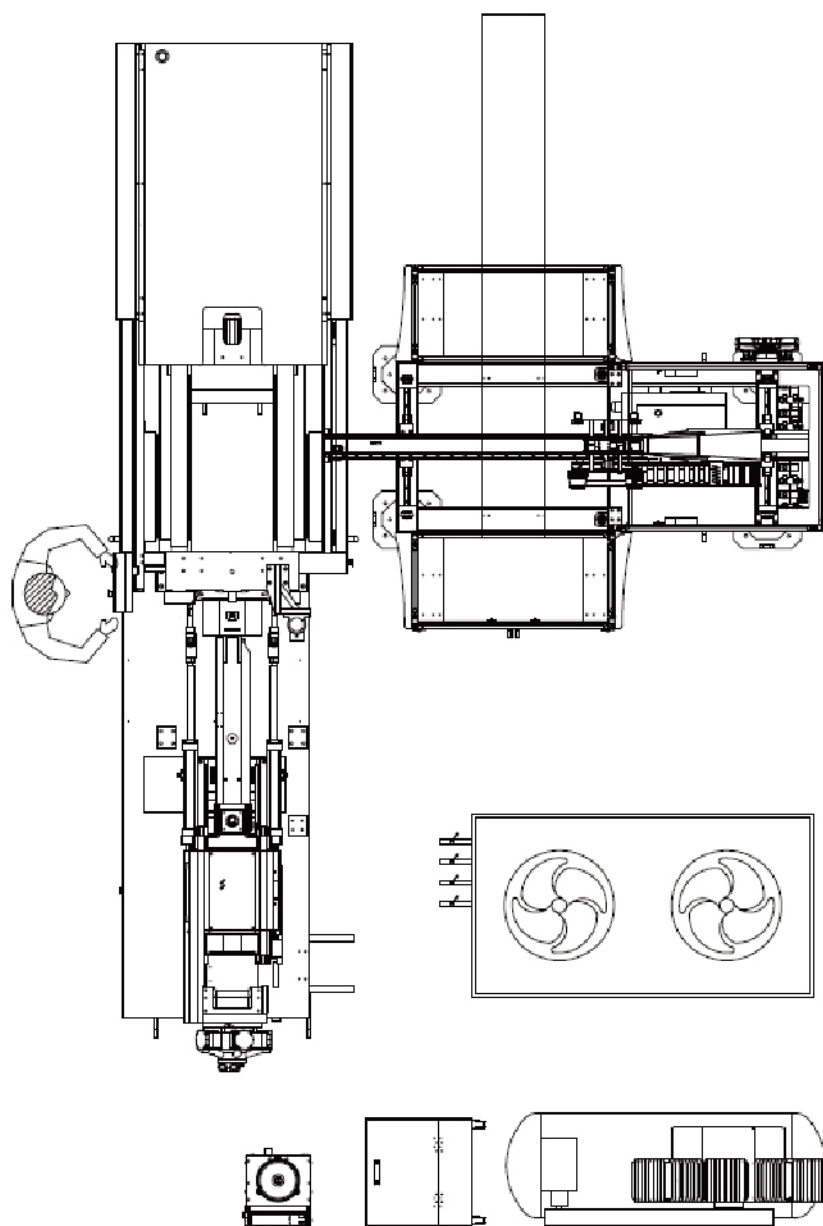
5 設備開發  
Equipment  
Development

6 整合測試  
Integration Test

7 裝機&教育訓練  
Installation & Training

8 專案驗收  
Confirmation & Closure

## 產線擺設規劃 Production Layout Design





## 應用產品 Examples of IML Applications

- 1 一般容器及蓋  
Normal containers and covers



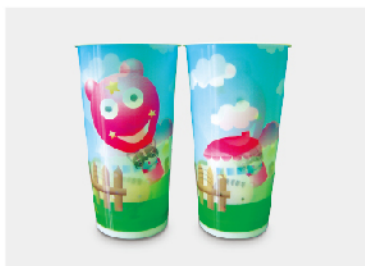
- 2 曲線杯  
Containers with cambers



- 3 立體成型標籤杯  
Labels with 3D characters



- 4 3D立體花紋標  
Labels with 3D graphics



- 5 金屬鍍膜杯  
Labels with a metal coating



- 6 顆粒防偽杯  
Labels with pellets



- 7 八角杯  
Containers with angles



- 8 發泡材質標籤杯  
Foam material labels



- 9 實體鑲入標籤杯  
Labels with thin-flat objects



- 10 RFID防偽杯  
Labels with RFID



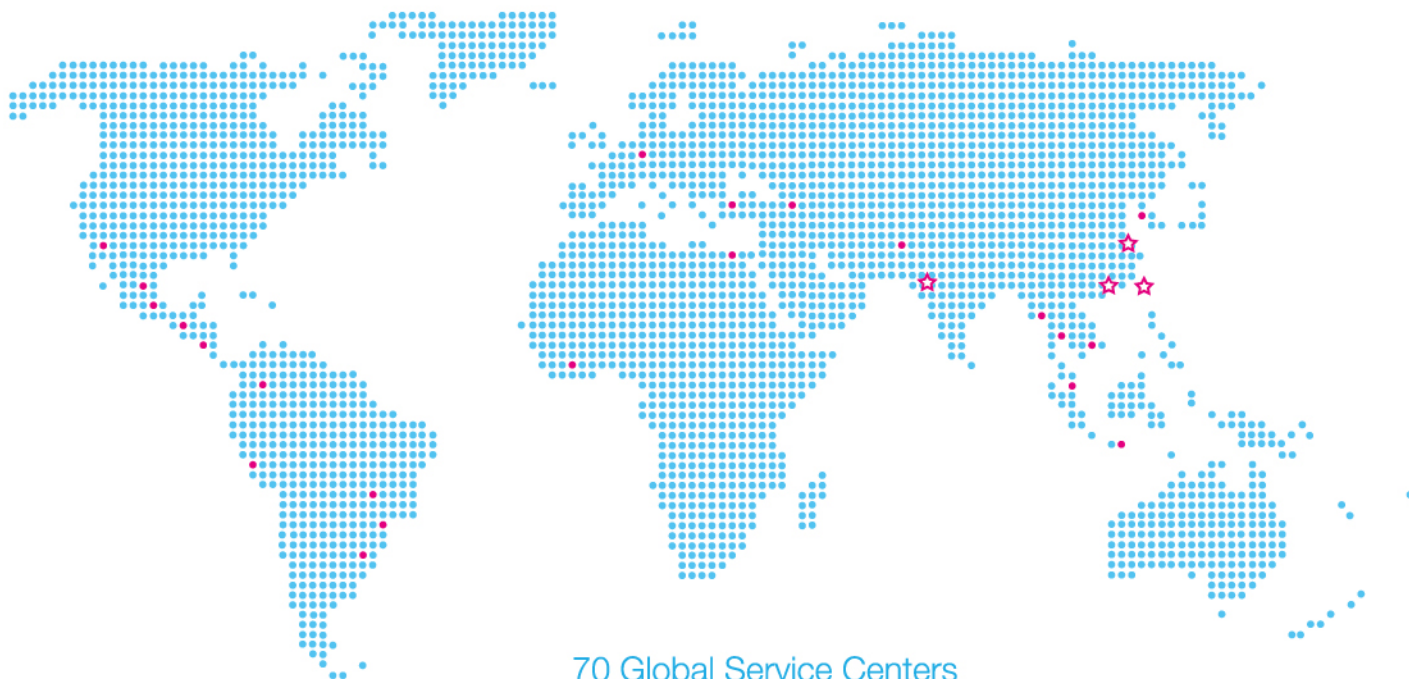
- 11 四角型容器  
IML for square boxes



- 12 客製化產品  
Customized products



## 【全球行銷服務網】Global Marketing Network



70 Global Service Centers

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## 富強鑫集團 FCS Group



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