



TIP Series

Rubber Injection
Molding Machine

橡膠射出成型機系列



TIP Applications

TIP 系列機型成品類別

Rubber Applications:

Natural rubber, Synthetic rubber, Metal boned part, Pharmaceutical usage rubber, Oil resistance rubber, Heat resistance rubber, Silicone

Automotive Spare Parts Industry:

Automotive rubber parts, O-rings, Brake diaphragm , Car window sealing strips, Dust seals, Tire bladder, Shockproof rubber, Shaft seals, Coupling seals, Boot seals

Electronics Industry:

Electronic parts, Rollers, Shockproof rubber

Lifestyle:

Medical parts, Rubber soles, Swimming appliances

適用橡膠類別：天然橡膠、合成橡膠、含骨架橡膠、醫療用橡膠、耐油橡膠、耐熱橡膠、矽膠

汽機車零件產業：汽機車雜件、O型環、煞車薄膜、汽車門條、防塵封、氣囊、減震橡膠、軸封、聯軸器

電子產業：電子零件、滾輪、減震橡膠

生活日常用品：醫療用品、橡膠鞋底、蛙鞋、潛水鏡框





TIP-2000-2RT-L-250-PCD

Vertical Rubber Injection Molding Machine (FILO)

立式橡膠射出成型機

Clamping Force 鎖模力 : 250 tons
Injection Volume 射出量 : 2000 c.c.

Mechanical features at a glance

- Simplicity in material preparation, flexibility in the production of complicated product.
- Compound pre-heating during loading process that save curing time and increase productivity.
- Material fully filled with mold via runner path.
- Constant injection control, decrease rubber flash and save labor cost.
- Vertical mold clamping device is suitable for product with insert.
- 備料簡單容易，不須秤重或考慮產品外型。
- 膠料經螺桿入料及控溫之預熱過程，有效縮短成品硫化時間、提高生產效率。
- 採用流道充填模頭方式，針對形狀複雜成品亦能輕易成型。
- 搭配模具之設計及定量射出控制，可大幅改善無效毛邊、節省工時成本。
- 立式夾模機構，方便含骨架工件放置。





Products 製造成品

- Automotive rubber parts
- Shockproof rubber
- Dust seals
- Coupling seals
- Shaft seals
- 汽機車雜件
- 減震橡膠
- 防塵封
- 聯軸器
- 軸封



Features 特寫說明

- Equipped with top and bottom hydraulic ejectors.
- Ejector with rails for runner plate moving out and remove flash easily.
- Different front kit design could apply for multi-demoldings.
- 配置上下吊模，提供各種模具應用。
- 上吊模配附滑軌，可供流道板滑出，方便清除廢料。
- 不同脫模部設計可供多種離型方式使用。

TIP-2000-2RT-L-250-PCD

J-Frame Rubber Injection Molding Machine (FIL0)

J型機構

Clamping Force 鎖模力 : 250 tons
Injection Volume 射出量 : 2000 c.c.

Mechanical features at a glance

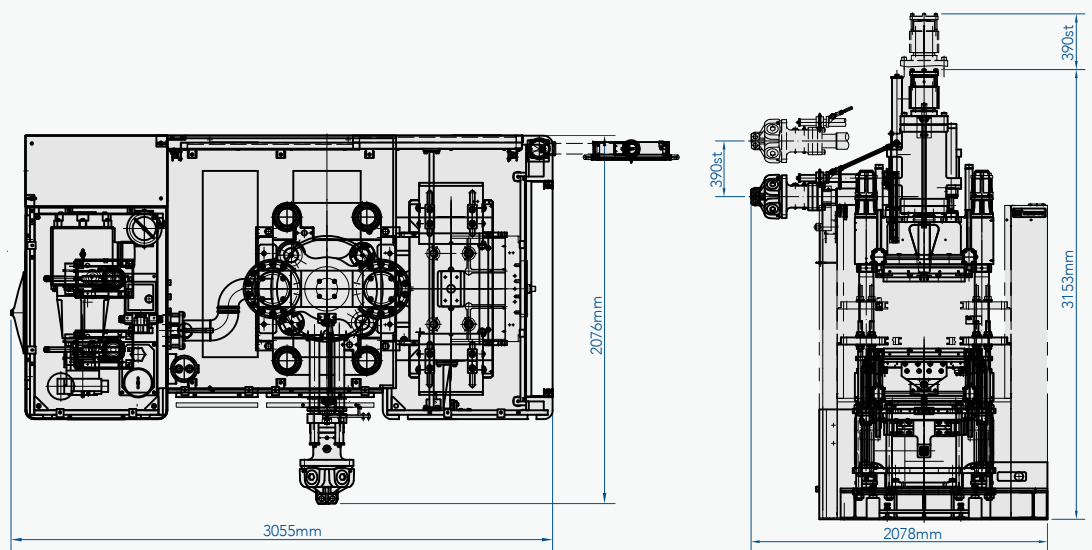
- Main frame with J type design to save space.
- Full operation on HMI with rotation arm to comply with ergonomic design.
- Optimization of temperature regulator design with orderly tubes to save space and improve operation noise.
- Equipped with guide sleeve on screw inlet to improve the rubber feeding capacity.
- Screw motor with reverse function, easily remove the residual rubber out of extruder.
- 機身J型設計，可減少佔地面積。
- 全人機操作搭配懸臂式連結桿，符合人體工學。
- 溫油器外形優化，配管簡潔，節省使用空間及改善噪音問題。
- 增加入料螺桿導套，提升入料能力。
- 選用可逆馬達，入料螺桿可進行逆轉動作，將膠料排出，可快速清理殘膠。

Products 製造成品

- Anti-vibration rubbers
- Dust seals
- Rubber rollers
- 防震橡膠
- 防塵封
- 橡膠滾筒



Dimensions 構造



Features 特寫說明

- Front kit with width adjusting design for different mold sizes applications.
- Suitable for various molds opening process.
- 脫模部寬度可調，模具可用範圍更有彈性。
- 可搭配模具設計，執行不同開模方式。

TIP-1500-2RT-L-200-PCD

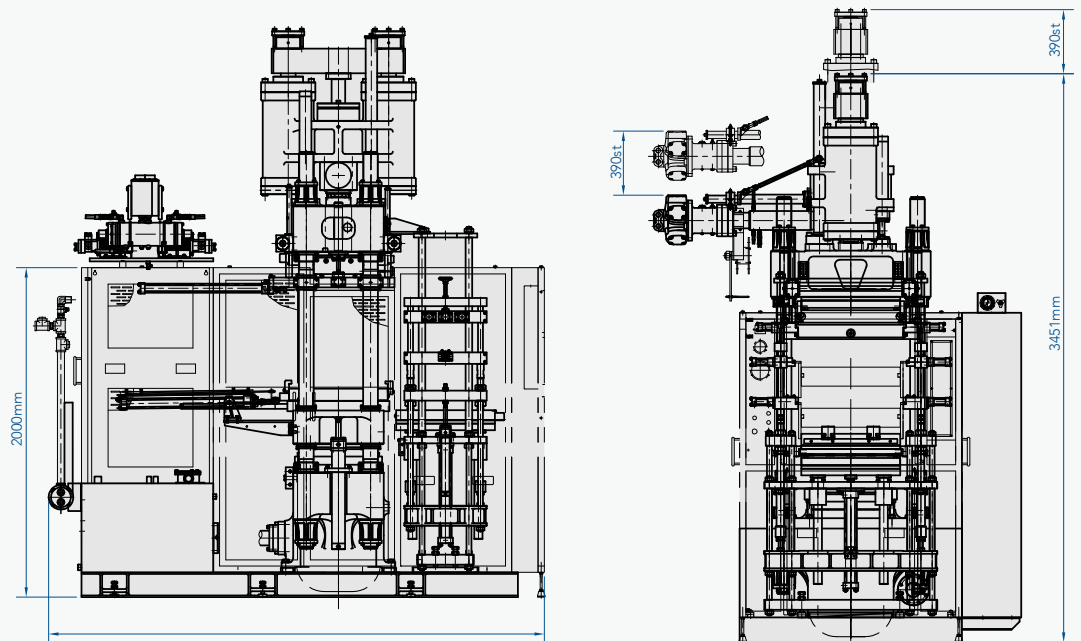
Double Molds Design (FILO)

雙層換模機型

Clamping Force 鎖模力 : 200 tons
Injection Volume 射出量 : 1500 c.c.



Dimensions 構造



Mechanical features at a glance

- Main frame with J type design to save space.
- Front kit with two layers design could operate two molds on the same press to increase productivity.
- Additional external heating platen for mold pre-heating.
- Start by two hands, ensure the safety.
- 機身J 型設計，可減少佔地面積。
- 脫模部雙層設計，可同時使用兩副模具，提升生產力。
- 外部熱盤提供模具預熱，節省生產時間。
- 雙手啟動，確保操作安全。

Products 製造成品

- Automotive rubber parts
- 橡膠汽機車雜件

TIP-V-1000-2RT-L-150-PCD

Vacuum Chamber Series (FIL0)

真空型

Clamping Force 鎖模力 : 150 tons
Injection Volume 射出量 : 1000 c.c.

Mechanical features at a glance

- Excellent prevent from heat loss for energy efficiency.
- Vacuum door design for better compound flow and non-bubbling which enhance the quality of products.
- Clamping unit can be individually utilized as a vacuum compression molding machine for multiple applications.
- 熱量不易流失，節省能源。
- 真空式設計，加強膠料流動防止氣泡產生，提高產品良率。
- 合模單元可單獨作為真空熱壓硫化成型機使用，機台用途更加多元化。





Products 製造成品

- Automotive Rubber Parts
- Electronic parts
- Medical parts
- 橡膠汽機車雜件
- 電子零件
- 醫療用品



Vacuum door open 真空門開



Vacuum door close 真空門關

Features 特寫說明

- Vacuum system for better compound flow and release air to enhance production yield.
- Vacuum door design can provide more space for mold operation.
- 真空式設計，加強膠料流動防止氣泡產生，提高產品良率。
- 真空門設計可提供更多模具操作空間。

TIP-150-A-L-75-S-PCD

Vertical Rubber Injection Molding Machine (FIFO) 立式橡膠射出成型機 (先進先出)

Clamping Force 鎖模力 : 75 tons
Injection Volume 射出量 : 150 c.c.

Mechanical features at a glance

- FIFO design to ensure quality of rubber compounds.
- Customized type with small injection volume for miniature product.
- 先進先出的入料機構可有效維持膠料品質。
- 小型射出機，適合微型產品精確生產。

Products 製造成品

- Dust cover
- 線性滑軌防塵套



Features 特寫說明

- Auxiliary feeding mechanism to improve rubber shortage.
- 配有輔助入料機構，改善斷料問題。



TIP-80-A-L-25-2-PCD

C-Frame Rubber Injection Molding Machine

C型機構

Clamping Force 鎖模力 : 25 tons
Injection Volume 射出量 : 80 c.c.

Mechanical features at a glance

- Easy control and precise injection volume performance.
- Double stations design for productivity increase.
- C-frame design for smooth operation.
- 易於操作，能達到精確射出量。
- 雙機型設計，提升生產能力。
- C型設計維持工作流程順暢。

Products 製造成品

- Car window seals
- 汽車門條



• Dust cover 線性滑軌防塵套



• Car window seals 汽車門條

TIP-15000-2RT-L-1200-PCD

Jumbo Size Machine

大型射出機

Clamping Force 鎖模力 : 1200 tons
Injection Volume 射出量 : 15000 c.c.

Mechanical features at a glance

- Main frame and injection unit equipped with linear transducer to ensure clamping position and injection volume.
- High efficiency mold vacuum system.
- Bottom heating platen moves out with mold to keep temperature.
- With mold safety design on the hydraulic system to detect the abnormal pressure before mold close.
- Horizontal injection unit to decrease the press height and suitable for premise limit.
- Suitable for bladder production to increase the bladder life and save materials.
- 主機上升下降及射出單元，使用高精密度光學尺控制，精確的控制合模位置與計算射出量之大小。
- 高效率模具真空系統。
- 下熱盤出模機構，模具保溫效果佳。
- 特殊油路控制系統，偵測到合模壓力異常時，會自動開模，防止模具損壞。
- 橫式射出單元，機台高度有效降低，有利於廠房高度限制使用。
- 生產之氣囊壁厚均勻穩定，可增長氣囊使用壽命並減少膠料浪費。

Products 製造成品

- Tire bladder
- 氣囊



TIP-320-H-100-PCD

Vertical Clamping Frame with Horizontal Injection Unit by Side 臥式射料立式合模機構

Clamping Force 鎖模力 : 100 tons
Injection Volume 射出量 : 320 c.c.



Robot Application 機械手臂運用

- Automatic process to save labor costs.
- 提高製程自動化，有效降低人力成本。



Mechanical features at a glance

- Vertical clamping frame with horizontal injection unit by side for easy mold changes.
- Precisely digital counter.
- FIFO injection unit is more suitable for rubber with high sensitivity on temperature.
- Could operate with silicone and rubber to increase the utility.
- With material shortage alarm and mold safety design to prevent defective products and mold damage.
- 臥式射料立式合模，模具安裝更換方便。
- 數位計量精準。
- 入料採用先進先出，對溫度控制較敏感的膠料更加適用。
- 矽橡膠可共用一台射出機，擴大原料運用範圍。
- 缺料警報及模具安全保護設計，預防因缺料而影響品質及保護模具因人為疏忽而造成損傷。

TIP-850-H-200-PCD

Horizontal Rubber Injection Molding Machine (FIFO)

臥式橡膠射出成型機 (先進先出)

Clamping Force 鎖模力 : 200 tons

Injection Volume 射出量 : 850 c.c.

Mechanical features at a glance

- With FIFO injection design, save process time and increase productivity.
- Horizontal structure with ergonomic design.
- 先進先出(FIFO)設計，可縮短流程時間、提升生產效率。
- 臥式機構設計符合人體工學，結合自動化流程，操作上更加順暢。

Products 製造成品

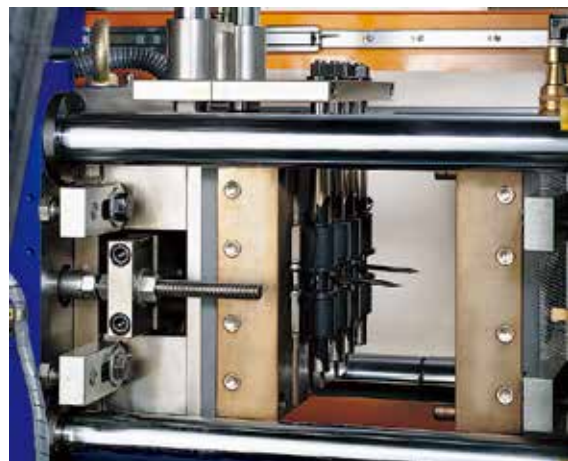
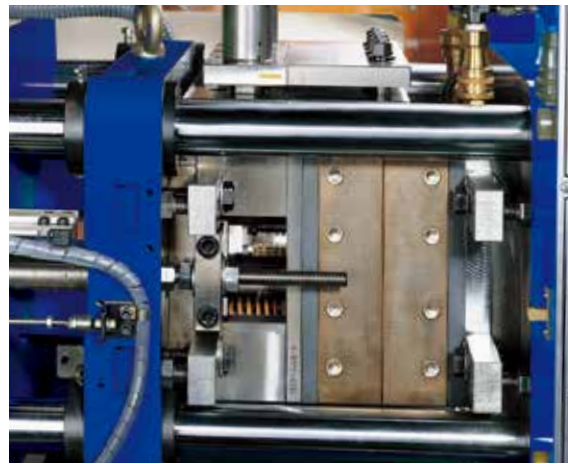
- O-rings
- Roller
- Brake diaphragm
- O型環
- 滾輪
- 煞車薄膜



Vertical Rubber Injection
Molding Machine
立式橡膠射出成型機

Special Purpose Machine
特殊專用機型

Horizontal Rubber Injection
Molding Machine
臥式橡膠射出成型機



Mold Heating Device 模具加熱裝置

- Decrease mold heating time.
- Keep mold temperature without heat loss.
- 縮短模具加熱時間。
- 保持模具溫度，防止熱能散失。

Optional Accessories 選購配備



Silicone Stuffer
矽膠輔助推筒

Available for silicone products process.
搭配此推筒可生產矽膠產品。



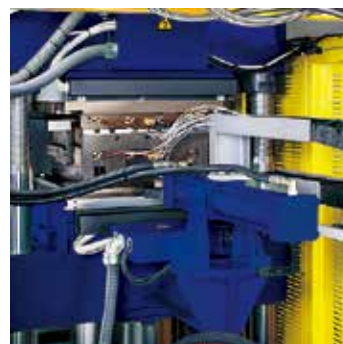
Horizontal Type Silicone Stuffer
臥式輔助推筒

Horizontal type is available.
可搭配臥式設計。



Cold Runner Block
冷膠道模具

To prevent the burned and wastage of rubber materials.
降低色料過程中，膠料的硫化現象，有效減少廢料。



Mold Heating Device
模具加熱裝置

Decrease mold heating time. Keep mold temperature without heat loss.
縮短模具加熱時間。保持模具溫度，防止熱能散失。



Top/ Bottom Hydraulic Mechanical Ejector, Synchronized Mechanism
上/下吊模裝置、同步機構

For synchronize several opening levels. Two sides guiding rods connected through a rack and pinion system achieve synchronization.
可運用於不同高度雙側導桿與齒排相連，並有機械式同步裝置。



Auto De-molding Device
自動脫模機構

Combined with molding design and automation operating system, to increase productivity.
搭配此機構可達到無人化操作模式，提高生產效率。



Clean Brush
清潔刷

Brush for mold clean to improve automation process.
可搭配模具清潔刷使用，提高機台自動化能力。



Robot Application
機械手臂運用

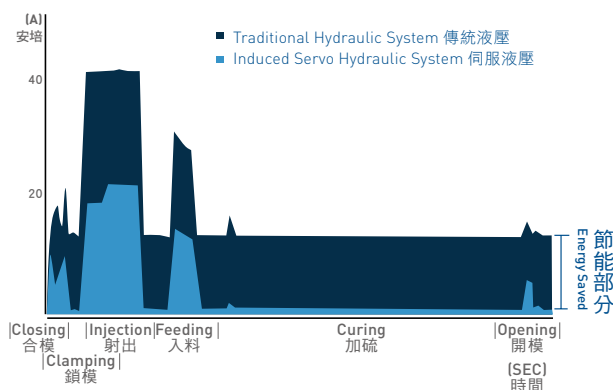
Automatic process to save labor cost
提高製程自動化，有效降低人力成本。

Hydraulic Servo Energy Saving System 油壓伺服動力節能系統

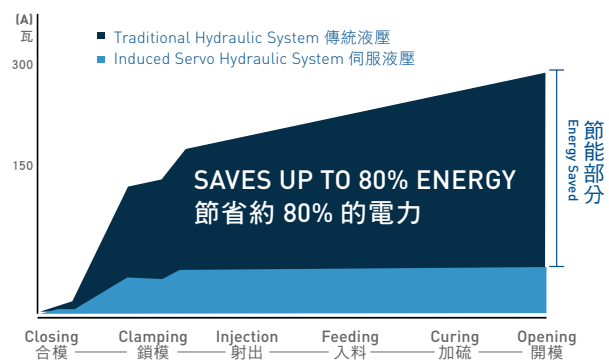


Saves up to 80% energy
極省電，較傳統定量泵節電80%

- Low noise :
High stability and efficiency with feature of low noise did provide quiet working environment for operator.
- High efficiency :
During the idle process of machine and long curing time, the pump keeps low rotation rate and low flow, it decreases the friction while hydraulic oil flowing in the pump and pipe. Then the temperature of hydraulic oil is stable. With stable temperature of hydraulic oil, the hydraulic unit and oil life cycle is extended.
- High electricity saving :
Compare to traditional motor with constant displacement pump, the energy system is saving more power.
- High accuracy:
With induced servo motor will be more accurate and stable on speed control.
- 低噪音：採用感應伺服馬達，具有高穩定性及高效率外，其運轉低噪音特性，提供安靜的工作環境。
- 高效率：因系統的高效率加上機器待機或長硫化時間，液壓油減少在泵浦及管路因流動摩擦產生的熱量，故液壓油溫度獲得極佳的控制；油溫的穩定性，相對確保液壓系統各元件及液壓油之使用年限。
- 高省電：本系統相對於一般傳統馬達搭配定量泵浦更為省電。
- 高精度：使用感應伺服馬達，速度的控制精度更為精確且穩定。



Output Ampere 輸出電流

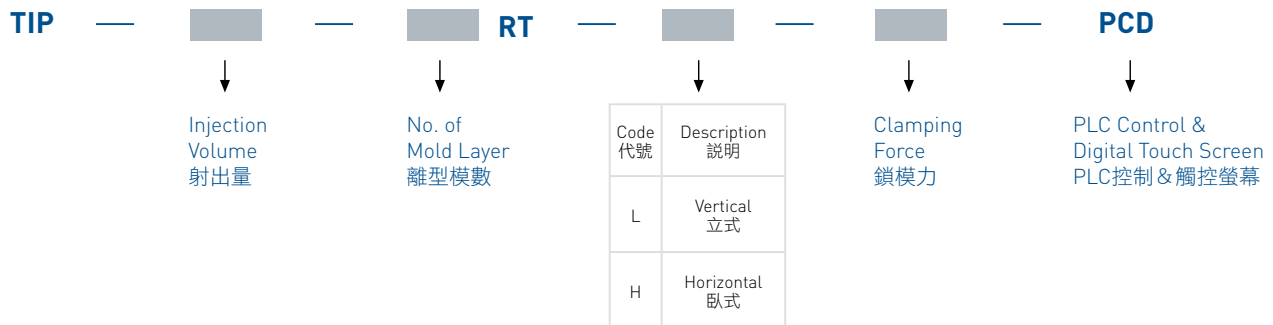


Power Consumption Per Cycle 單次功率累積

※ 以射出機2000c.c./鎖模力250噸為基礎比較，數據會因模具、配方及硫化時間而有差異

※ The comparison is on the base of injection molding machine with 2000c.c./250 tons clamping force. The data will be different by mold, recipe and curing time.

TIP Model Guide 型式說明



Technical Specifications 機器規格表

Machine Type	機型		TIP-L Vertical						
L 立式	Injection Unit	射出單元							
	Injection Volume	射出量	c.c.	500	1000	1500	2000	3000	3000
	Injection Pressure (Standard / High Pressure)	射出壓力 (標準 / 高壓)	kg / cm ²	1800 / 2200	1800 / 2200	1800 / 2200	1800 / 2200	1800 / 2200	1800 / 2200
	Injection Flow	射出率	c.c. / sec	65	76	76	134	175	175
	Clamping Unit	夾模單元							
	Clamping Force	鎖模力	tons	150	200	250	250	350	500
	Heating Platen (L.R. X F.B.)	熱盤尺寸 (左右 X 前後)	mm	450 X 500	450 X 500	570 X 610	570 X 610	700 X 700	800 X 800
	Daylight	最大開檔	mm	400~600	450~650	450~650	500~650	500~700	500~700
	Stroke	主機行程	mm	350	350 / 400	400	400	400	400
	Mold Thickness	使用模高	mm	50~400	100~600	50~600	100~600	100~650	100~650

Machine Type	機型		TIP-H Horizontal				
H 臥式	Clamping Force	鎖模力	tons	50	100	200	500
	Mold Opening Force	開模力	tons	1.7	2.5	3.4	17
	Piston Dia.	活塞直徑	mm	Ø190	Ø270	Ø355	Ø560
	Clamping Stroke	夾模行程	mm	275	430	450	700
	Daylight	最大開檔	mm	500	650	550	800
	Mold Size	模板固定尺寸	mm	H 375 X W 480	H 565 X W 675	H 505 X W 510	H 800 X W 800
	Post Distance (F.R. X T.B.)	支柱間距 (前後 X 上下)	mm	335 X 230	455 X 345	260 X 660	820 X 820
	Max. Injection Volume	最大射出量	c.c.	314	622	1000	3000
	Max. Injection Pressure	最大射出壓力	kg / cm ²	1640	1710	2000	2200