



卡蓮達機械  
CALENDER

專業提供橡塑膠系列整廠設備

Specialist in Rubber Processing  
Whole-Plant Equipment



# 公司簡介 Company Profile

卡蓮達機械工業股份有限公司自1993年創立以來，一直以“客戶的需求”作為公司經營成長方針，並致力於橡膠、塑膠設備及輪胎生產線之規劃、設計、製造與輸出。本公司以嚴謹的開發、設計及精良的品質與誠摯的服務來滿足客戶需求。

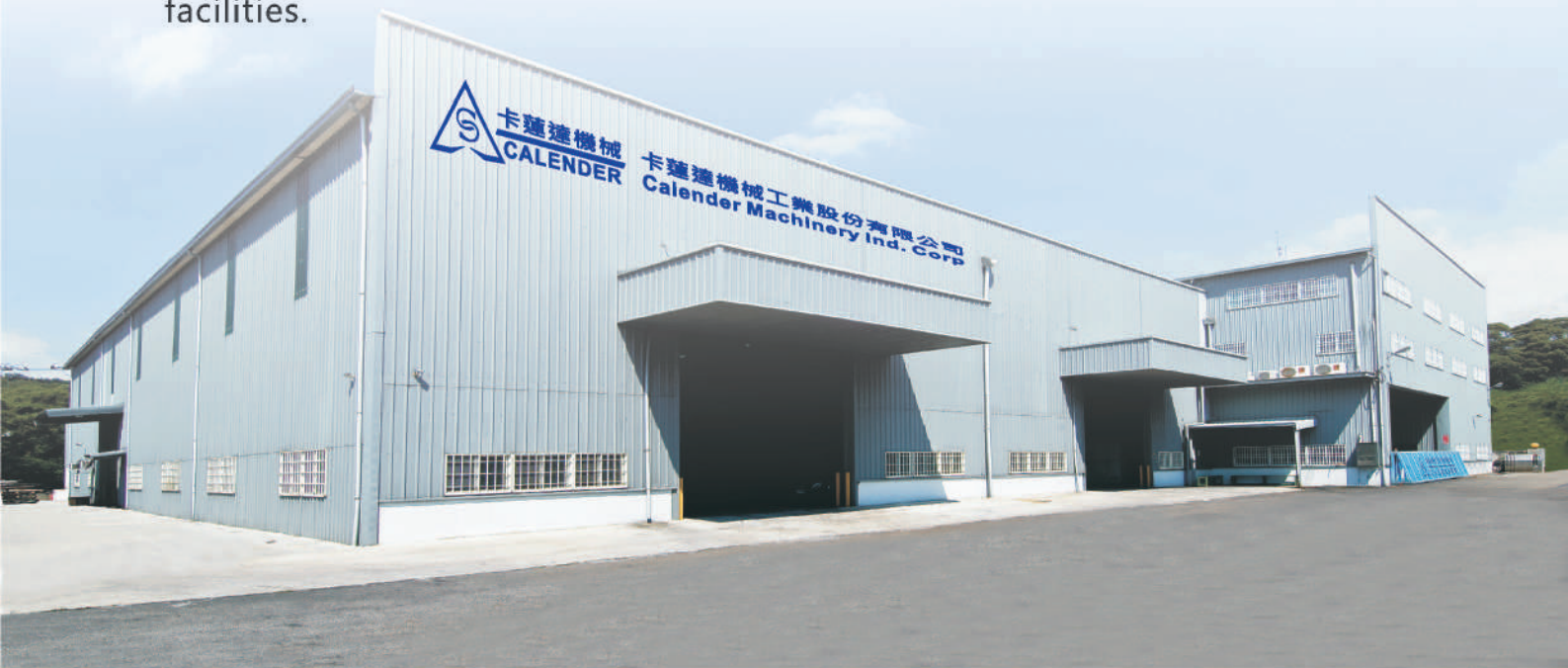
本公司以最先進完整之生產技術及設備，先後研發出50L、75L、100L、110L、180L、270L、320L、370L高速密煉機、1.6L試驗用高速密煉機、擠出壓片機、雙滾輪軋輪機、橡膠膠料冷卻裝置、二本試驗用混合機、三本色料研磨機、冷料橡膠押出機及週邊附屬設備等，並協助客戶改善現有生產設備與製程，以達最佳生產製程。

目前國際貿易發達，本公司將更積極拓展海外市場，以更嚴格、更專業、更高品質來面對客戶的需求，以期繼歐、美、日之後，成為國際生產橡、塑膠及輪胎設備大廠。

Since our establishment in 1993, Calender Machinery Ind. Corp. has insisted on "Fully Satisfying Customer Demands" when doing business. Calendar Machinery excels in the planning, designing, manufacturing, and exporting of rubber and plastic processing equipment, as well as tire production lines. The spirit of rigorous R&D, design, excellent quality and sincere services to meet customers' needs.

Using the most advanced production technologies and equipment, we have developed a wide array of rubber and plastic processing machines, including 50L, 75L, 100L, 110, 180L, 270L, 320L and 370L Internal Mixer, 1.6-liter Laboratory Internal Mixer, Twin Dump Roller, Two Roll Mixing Mill, Batch-Off Machine, Laboratory Mixing Mill, Three Roll Mill, Cold Feed Rubber Extruder and associated peripheral equipment. We also help customers to improve their production equipment and production processes.

To further expand our overseas markets, we will strive to exceed customer requirements with the best possible products, even more stringent quality control tests, and even more professional services. We hope that in the near future we will become one of the world's most prominent manufacturers of outstanding rubber and plastic processing equipment, as well as tire-marking facilities.



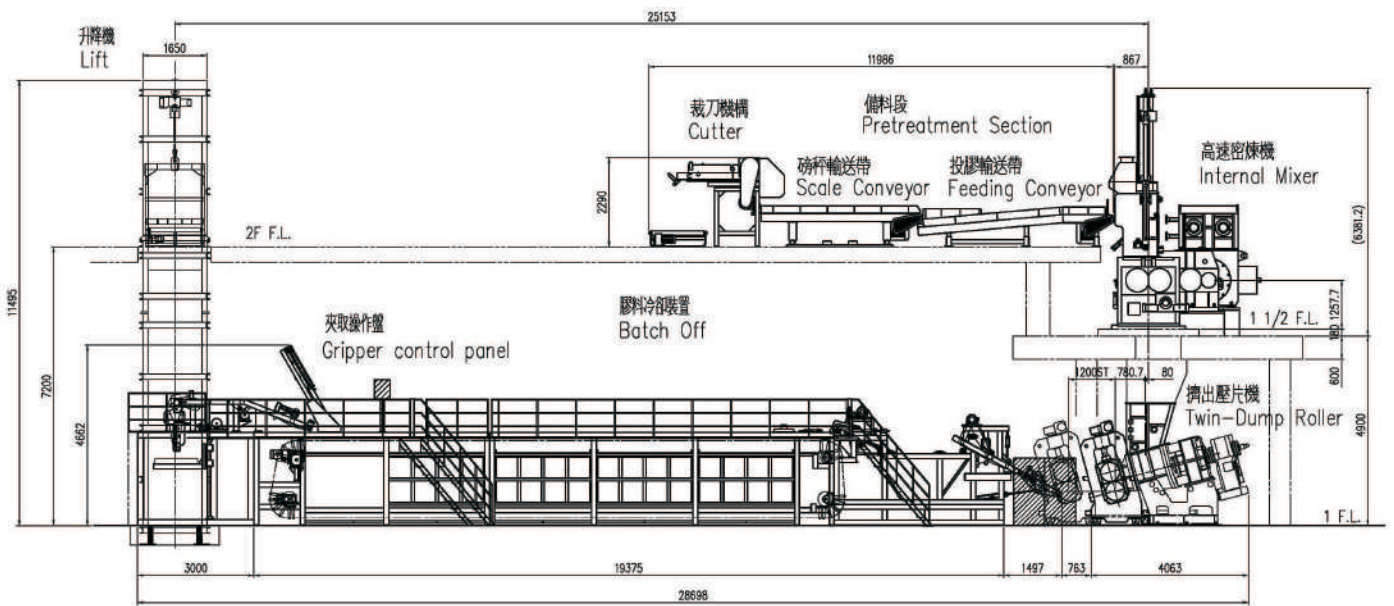
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# 密煉機生產線 Internal Mixer Production Line

精簡、確實、穩定之生產排程，有效提供給客戶高品質要求  
 Streamlined, reliable and stable production schedule which can effectively provide customer high quality requirements.





# 高速密煉機 Internal Mixer

**功能:**  
能將膠料與混合劑在短時間內獲得最佳的混煉效果。

**Function:**  
The Internal Mixer is a high economical machine it can mix the material and compound and get the best mixing effect in the short time.

台灣專利 M482600  
台灣專利 M483950  
TAIWAN Pat. M482600  
TAIWAN Pat. M483950



## 規格 / Specifications :

型式 Model	內容積 L Mixing capacity	主動力 HP Main motor	轉子轉速rpm Rotor speed
CL-BM50	50	150	30/35
CL-BM75	75	200	32/36
CL-BM100	100	400	40
CL-BM180	168	1066	60
CL-BM270	270	2000	60
CL-BM370	412	3000	60
CL-BMH110	104	600	10/50
CL-BMH320	320	2400	10/60

## 特點 :

1. 混煉室用蜂巢式鑽孔雙循環水道設計，葉片通水強制循環冷卻，實現低溫混煉排除以往過度發熱產生之混煉困擾。
2. 可程式控制(PLC)配合人機介面及PC圖控軟體，可執行手動、半自動及全自動生產模式，並可遠端即時監控生產狀態，並記錄各項工藝條件，即時趨勢圖表數據。
3. 多型式的轉子設計適用各種不同膠種生產作業。
4. 提供氣壓型及油壓型上頂栓供選配使用。
5. 轉子轉速可依客戶製作須求有單速、雙速、多段速度選配，視膠種並有同步及非同步轉子設計。

## Features:

1. Mixing chamber has cellular drilling dual-circulation water-cooling system to achieve low temperature mixing and without overheating.
2. PLC cooperates with HMI and PC that enables manual, semiautomatic, and automatic operation. The HMI enables direct monitoring of the mixing process and records various technique conditions and chart data.
3. We design different rotors apply to various types of materials production operation.
4. Provide pneumatic and hydraulic hopper for option.
5. According to customers' requirements, rotor speeds could be single-speed, two-speed, and multi-speed. Base on the materials, there are synchronous and asynchronous rotor designs.

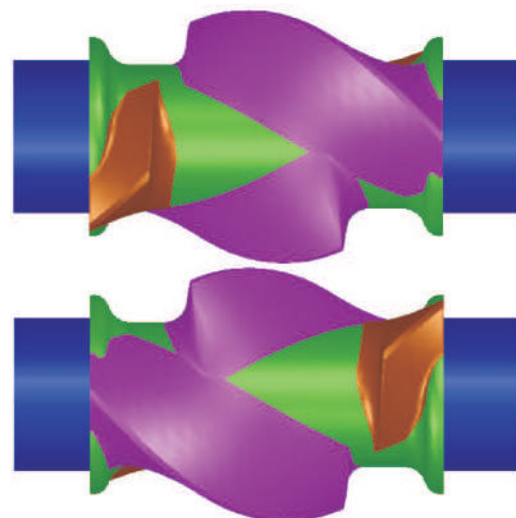
## 轉子型式 / Rotor types:

2 葉稜 2Wing	4 葉稜 4wing	6 葉稜 6Wing	咬合型 Intermeshing rotor
S2	NT、HNT、 T4、SS2	HT6	IWR

備註:S2及T4為差數轉子。

Remark: S2 and T4 are asynchronous rotors.

# 高速密煉機 Internal Mixer



1. HNT 4稜同步轉子為卡蓮達公司最新轉子技術，結合NT加強轉子葉稜設計，將材料分佈在軸向混合，增加原料流動和剪切強度，產生最好的混合效果。
2. HNT 4稜同步轉子比2葉稜轉子提升生產率 14%，比4葉稜轉子(NT)提升6%，能節省17%的能源效率，使用者更能獲得更多經濟效益與更完美的品質。

1. HNT, 4 wing synchronous rotor is the latest rotor technology of Calender Machinery Ind. Corp. HNT rotor combined with the design of NT enhanced rotor wing, separate material in axial mixing, adds material flow and shearing strength, made the best mixing effect.
2. HNT, 4 wing synchronous rotor is about 14% higher production efficiency than 2 wing rotor, 6% higher than 4 wing rotor (NT), and save 17% energy efficiency. The user can get more benefits and better quality.



# 擠出壓片機 Twin Dump Roller

## 功能:

本機用於高速密煉機的下輔配套設備，密煉機混煉後所排出的膠料可直接投入，經過雙螺桿擠出後自動壓成膠片，操作簡單，且能連續化的作業，是自動化的最佳配備。

## 特點：

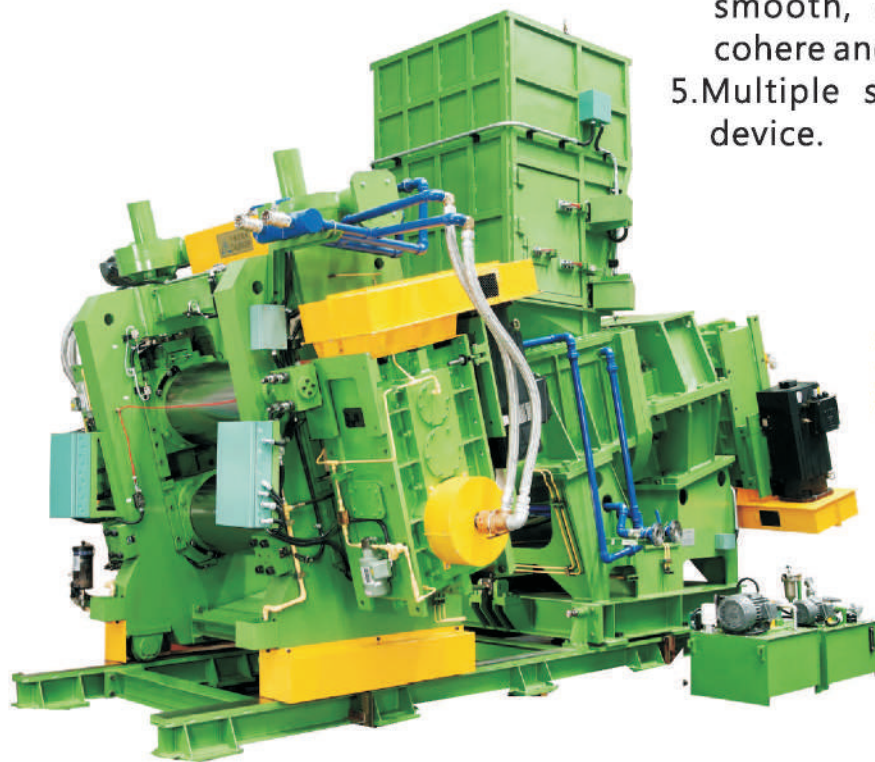
1. 取代軋輪機，減少操作人員。
2. 壓延膠片連續不斷片，且更加的密實、整齊、光滑。
3. 機筒進料開口大，成為高效能的進料器。
4. 散熱效果好，使膠料流動順暢，不燒焦、不黏結，機筒內無殘留膠料。
5. 設置了多重安全保護及警報裝置。

## Function:

Twin Dump Roller is the downstream equipment of the Internal Mixer. The rubber material can be discharged directly into the machine after Internal Mixer. Twin Dump Roller pressed material into sheet automatically, simple and continuous operation. It is the best equipment for automation.

## Features:

1. Replace mixing mill and labor saving.
2. Continuous sheeting, high density, clean, and smooth.
3. High efficiency feeder.
4. Good dissipation, material flowing smooth, does not scorch, does not cohere and no residual material.
5. Multiple safety protection and alarm device.

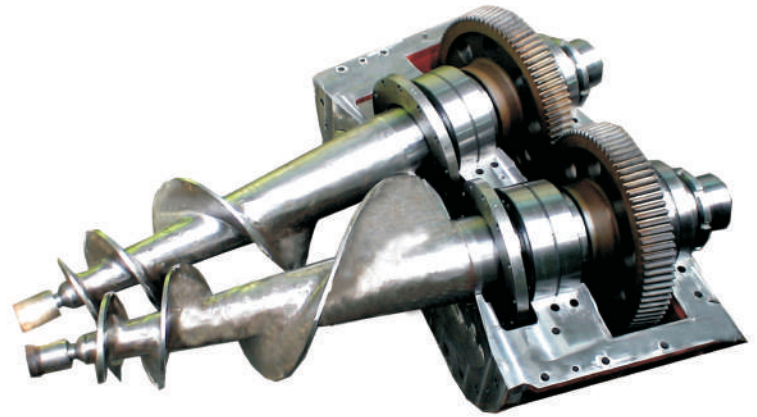


台灣專利 M482599  
TAIWAN Pat. M482599

型式 Model	適用密煉機 Matching mixer's size	主動力 HP Main power	滾輪尺寸 Roll size	出片寬度 Sheet width
CL-TDR100	75L-100L	60HP×2	φ 355(14" )	500
CL-TDR180	160L-200L	60HP×4	φ 406(16" )	600
CL-TDR270	240L-310L	100HP×4	φ 508(20" )	760
CL-TDR370	370L-430L	120HP×4	φ 508(20" )	800(900)

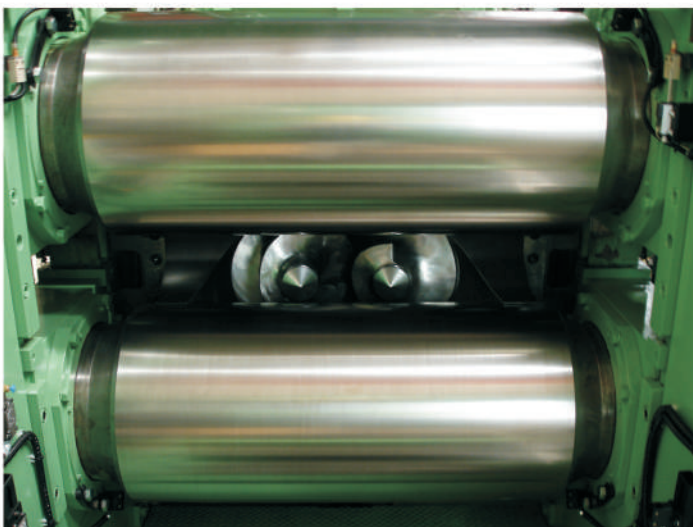


# 擠出壓片機 Twin Dump Roller



採錐形雙螺桿交叉同步設計，螺桿葉片間距由大至小，可使承接之膠料無空翻之慮，亦即無論是整糰或是散料，該螺桿葉片均能有效擠入筒內，使膠料能聚集並往前端輸送。螺桿葉片與擠出筒身設計有適當間隙，當無膠料狀態時，不致於與擠出料筒磨擦。該雙螺桿交叉同步設計，能完全使擠出筒內膠料完全擠出，無殘料於擠出料筒之憂慮。

Twin dump roller is adapted cross-synchronous design and the screw blade pitch from large to small that can undertake the plastic material without flip. No matter it is the whole lump or bulk material, the screw blade can effectively squeeze into tube, so that rubber can gather and transport to the front. The design of screw blade and barrel has proper gap that the blade won't friction with barrel when not rubber state. The cross-synchronous design can extrude the rubber out completely and no residual material.



壓片機之兩滾筒轉數可同步固定或依膠料給予不同轉數，達到最佳的摩擦率，使膠料混合過程中避免任何黏附。下滾筒為搖動設計，配合壓力檢出，可與擠出機作適當之速度調配。上滾筒上下調整範圍為1mm~25mm(視機種而定)，可使使用者作適當出膠厚度調配。清料時，上滾筒可由25mm提升至200mm，以利使用者清料。上滾筒角牙及軸承箱接觸面設有安全片，以保護滾筒及軸承。

Two roller rpm of Calender can be synchronous fixed or according to the material given different rpm to achieve the best friction rate and avoid any adhesion during the mixing process. Under roller is swing design, cooperate with pressure detection that can adjust the speed according to the extruder. According to the different thickness demand, upper roll can be move up or down from 1mm to 25mm (depending on the model). Upper roller can be increased from 25mm to 200mm for operator to clear material. The contact surface of upper roller screw and bearing box has safety disc to protect roller and bearings.

# 雙滾輪軋輪機 Two Roll Mixing Mill

## 功能:

用於橡膠、塑膠(P.V.C.或E.V.A.)之素煉、混煉及代替壓延機作非精密出片。

## 特點：

1. 滾輪：冷硬合金鑄鐵、厚度均勻冷卻效果佳。
2. 機架及上蓋：鑄鋼或鋼板焊接，安全強度及加工精度高。
3. 滾輪間隙調整裝置：可選用手動式或電動調整及間距顯示。
4. 減速機:全密閉式強制潤滑，安全係數高、噪音小。

## Function:

For mixing and kneading raw rubber plastic (P.V.C or E.V.A) material, besides, it can be as the calender to produce rough rubber and plastic sheet.

## Features:

1. Roller: Made of chilled casting alloy and uniform thickness with good cooling effect.
2. Frame and cover: Made of steel casting or welded by steel plate, which have safety strength and high precision machinery.
3. Roller gap adjustment device: Options: manual or electric adjustment and gap display.
- 4.Reducer: full-closed type, forced lubrication, high safety factor, and less noise.



型式 Model	CL-MR1230	CL-MR1436	CL-MR1642	CL-MR1848	CL-MR2260	CL-MR2472	CL-MR2684	CL-MR2884	CL-MR3090
滾輪規格 Roll size	12"×30"	14"×36"	16"×42"	18"×48"	22"×60"	24"×72"	26"×84"	28"×84"	30"×90"
主動力 HP Main motor	30HP	40HP	50HP	75HP	150HP	200HP	250~300HP	300~350HP	350~400HP

註：滾輪長度可依客戶需求和混煉膠料種類客製化。

Rollers' length could be change according to the customers' demand and material type, customized.

# 橡膠膠料冷卻裝置 Batch-Off Machine

## 功能:

本機與密煉機、擠出壓片機或軋輪機（出片機）配套使用，密煉機混煉好的膠料，經擠出壓片機或軋輪機出片，膠片進入本機進行浸泡，冷卻晾乾後進行連續疊膠。

## Function:

Cooperate with Internal Mixer, Twin Dump Roller or Two Roll Mixing Mill (Sheeter). After mixer, squeeze and produce sheeting by Twin Dump Roller or Mixing Mill, and then film go through the Batch-Off Machine soaking, cooling, dried and folding.



## 特點：

1. 接取裝置為鋼輪輸送，配有印字輪、膠料連接壓輪、分條裁刀(寬度可調)。
2. 粉漿槽輸送裝置為塑鋼網，壽命長。
3. 兩裝置電機與擠出壓片機保持同步。
4. 掛膠區全封閉式，強力風扇斜吹膠片，增加冷卻效果。
5. 收膠為搖擺機構配合自動折疊裝置，不需人工折疊。
6. 本機可選擇增設自動裁刀、自動抓取裝置、自動取樣裝置、金屬探測裝置，經濟方便、省時省力。

## Features:

1. Steel wheel conveyor type of the pick-up device is composed of printing wheel, rubber joining roller, and slitting device (width adjustable).
2. The dipping conveyor is plastic steel mesh with long life.
3. Two motors keep synchronization with Twin-Dump Roller.
4. Hanging area is fully-closed with powerful fans that can increase cooling effect.
5. Swing device of collecting is cooperated with automatic folding device without manual folding.
6. Options: auto-cutting device, auto-clamping device, auto-sampling device, and metal detector are optional, for even more economical, convenient, time and labor saving.

型式 Model	密煉機規格 Mixersize	膠料寬度 Max Sheet width
CL-BO100	75L~120L	650mm
CL-BO180	160L~200L	850mm
CL-BO270	240L~300L	850mm
CL-BO370(430)	350L~430L	950mm

# 冷料橡膠押出機 Cold Feed Rubber Extruder

## 功能:

將貯存之切條橡膠混煉押出各種所需形狀。

## Function:

Extrude the storage rubber into the desired shapes.

## 特點:

1. 多區獨立自動調溫系統，可依其作業任意調節設定溫度或直接冷水循環。
2. 模頭採用氣油壓模頭，清換膠料及口金方便快速。

## Features:

1. Multi-zone and individual auto-temperature control system that can be adjusted and set as the operation required or cold water circulation directly.
2. Extrusion head adopts air-oil die head, change materials and die easy and quickly.



型式 Model	螺桿直徑 Screw diameter (m/m)	軸長與直徑比 Ratio of screw length and diameter (L/D)	主動力 Main motor (HP)	螺桿轉速 Screw speed (RPM)	調溫區數 Temperature control zone
CL-CE75	75	15	50	6-60	3
CL-CE90	90	15	75	5-50	4
CL-CE100	100	15	100	5-50	4
CL-CE120	120	16	120	5-45	5
CL-CE150	150	16	150	5-45	5
CL-CE200	200	18	350-400	3-32	6
CL-CE250	250	18	500-600	3-25	6

## 銷釘式Pin-type:

型式 Model	螺桿直徑 Screw diameter (m/m)	軸長與直徑比 Ratio of screw length and diameter(L/D)	主動力 Main motor (HP)	螺桿轉速 Screw speed (RPM)	調溫區數 Temperature control zone
CL-CP90	90	12	100	5-50	4
CL-CP120	120	14	150	4-45	5
CL-CP150	150	16	300-400	4-40	5
CL-CP200	200	15	300-400	3-32	6

# 三本色料研磨機 & 試驗用三本混合機

## Three Roll Mill & Laboratory Three Roll Mill

### 三本色料研磨機 Three Roll Mill

#### 功能:

本機用於混合和分散橡塑膠色母塗料，顏料、著色劑、E.V.A或P.V.C及相關化工原料的細度研磨。

#### 特點:

1. 油壓式作動，壓力、間距依產品類別設定調整。
2. 操作簡易，品質均一穩定。



#### Function:

For mixing and dispersing rubber plastic paint, pigment, colorant, E.V.A or P.V.C and relative chemical industry ingredient.

#### Features:

1. Hydraulic operation pressure and pitch can be adjustment and setting according to the products.
2. Easy operation and uniform quality.

型式 Model	CL-TR16	CL-TR06
滾輪規格 Roll size	406	152
主動力 HP Main motor	75(75/56) 100(100/75) 125	10
滾輪轉速 前/中/後 Roll speed Front/Mid./Rear	13/40/123 (10/30/93)	18/46/122

### 試驗用三本混合機 Laboratory Three Roll Mill

#### 特點:

1. 體積小、低噪音、操作容易。
2. 抽取式界板，清車、換色快速容易。
3. 附前、後膝式緊停押板，安全可靠。

#### Functions:

1. Small size, lower noise, easy operation.
2. Removable board, easy to change colors and rinse.
3. Attached the front and rear knee-type of emergency stop pallet, safe and reliable.



## 1.6L 試驗用高速密煉機 1.6-liter Laboratory Internal Mixer

### 功能:

先以適量的原料及填充劑，經多次實驗直到符合實際要求，再將實驗的結果依其比例用於生產線或達到比較分析的目的。

### 特點:

1. 全自動的潤滑、給油、恆溫、控制系統。
2. 可程式控制(PLC)，配合人機界面可即時設定、顯示各項操作參數及工藝條件。
3. 配合PC連接可儲存及列印達到同步化的管理目的。

### Function:

Adopt proper material and filler for several times of testing until the testing meets the requirement and can be used for the production line or achieve the purpose of comparative analysis.

### Features:

1. Full-auto lubrication, oil, constant temperature, and control system.
2. Programmable Logic Control (PLC) cooperate with Human-Machine Interface can be set and display various operation parameters and technological conditions.
3. Connect with PC that can store and print in order to achieve synchronization management purposes.



型式 Model	內容積 L Capacity	主動力 Motor	轉子轉速 Rotor speed
CL-BM16	1.56	30	Max 90/100

## 二本試驗用混合機 Laboratory Mixing Mill

### 功能:

桌上型，試驗用混合機為橡、塑膠工業，重要實驗設備之一，主要功能在於配色打樣及比較分析使產品能符合客戶所要求的品質及顏色。

### Function:

Table-type, it is an essential laboratory equipment for mixing-test on rubber and plastic industry.

The main function is to color proofing and comparative analysis in order to meet customers' requirements.



型式 Model	滾輪規格 Rollsize	主動力(HP) Main motor
CL-LM412	4" x12"	3
CL-LM615	6" x15"	5-7.5
CL-LM820	8" x20"	7.5-10
CL-LM1026	10" x26"	20

## 高壓注油器 High Pressure Lubricator



**功能:**  
配合密煉機使用。

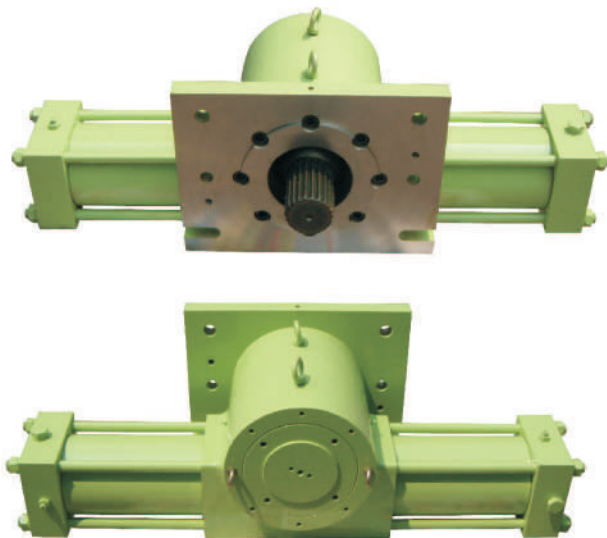
**Function:**  
For Internal Mixer.

**特點:**  
1. 傳動方式可分為直結式  
及垂直連結式。

**Features:**  
1. Driving types: direct-link  
and vertical-link.

型式 Model	使用口數 Outlet number	出口壓力 Outlet pressure	馬力 Power
CL-PR-4	4	450/700	½HP
CL-PR-8	8	450/700	1HP
CL-PR-12	12	450/700	1HP

## 油壓迴轉缸 Hydraulic Rotary Cylinder



**特點:**  
1. 多角度的設計適用各類  
工業生產設備。  
2. 連結方式為開放式，可  
依客戶指定配合製作。

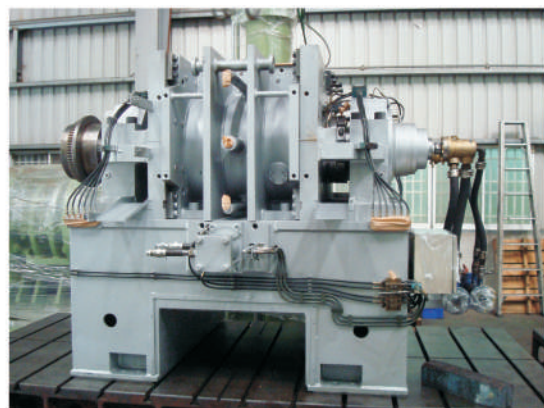
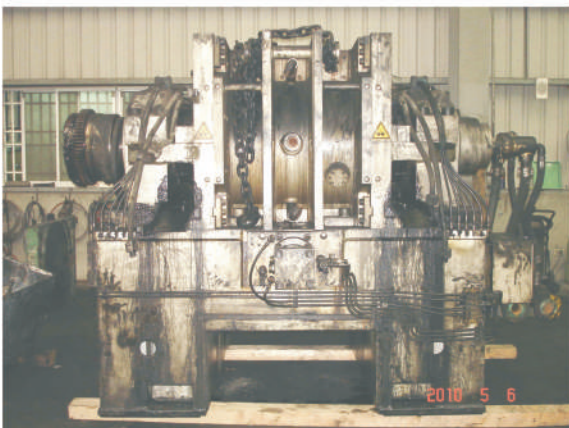
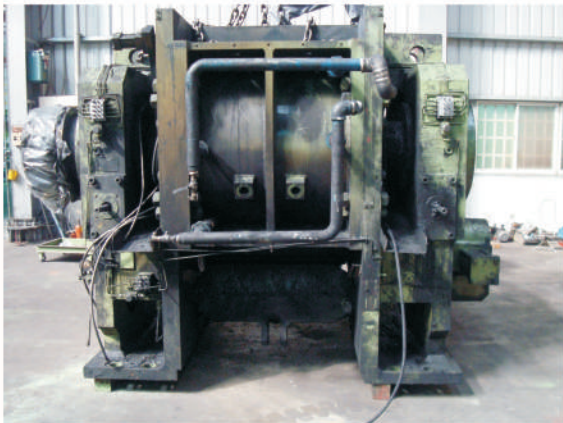
**Features:**  
1. Multi-angle design for  
various industrial  
production equipments.  
2. Linking is open type and  
can be set up according  
to customer's request.

型式 Model	最大操作壓力(Max.) Operating pressure	出入油口 Oil outlet/inlet	旋轉角度 Rotary angle
CL-RC-100	150kg/cm <sup>2</sup>	PT ¾"	180°
CL-RC-120	150kg/cm <sup>2</sup>	PT 1"	180°
CL-RC-150	150kg/cm <sup>2</sup>	PT 1"	180°

# 重建與整修設備 Rebuild and Repaired equipment

本公司專對歐美日系高速密煉機維修。

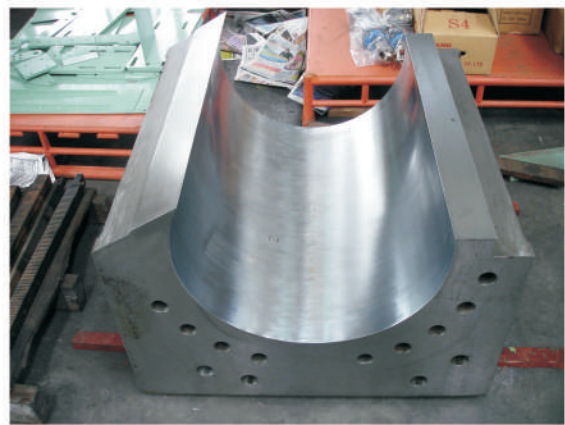
Specialize in the European, American, Japanese Internal Mixer repaired.





# 重建與整修設備 Rebuild and Repaired equipment

- 著重於混煉室(轉子、動圈、靜圈、卸料門、車壁耐磨板)整修或製新品。  
Focus on Mixing Chamber (rotor, wear ring, gland ring, discharge door, wear plate) repair or make new products.
- 恢復混煉室各項標準尺寸。  
Restore the standard sizes of the Mixing Chamber.





卡蓮達機械  
CALENDER

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Calender Machinery Ind. Corp



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