

先進鈹金加工設備 最齊全的機種選擇

Advanced Sheet Metal Processing Equipment
The Most Comprehensive Range

RH27

Tailift CNC Machine

CNC 轉塔式沖床機

CNC TURRET PUNCH PRESS



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伺服油壓轉塔式沖床

Servo-Hydraulic Turret Punch Press

台勵福 Tailift

RH27

- ◆ 採用德國H+L高階油壓系統的RH27是承襲台勵福油壓系列的高可靠性及耐用性口碑，改良的新一代加工設備，能提供更大的沖壓噸數彈性，有利于沖壓較厚的板件。具有沖孔與攻牙(選配)等多工性能，大幅減少無效率工時的等待，顯著提升板件加工效率。再者，本機台擁有節能、高精度與快速完成工件的特性，加上高集成的組裝結構，有效降低日後的維護成本，是鈹金加工工廠的最佳選擇。

RH27 punch press machine is new generation for Servo Hydraulic series, inherited the features of high reliability and durability from series HP. With Germany H+L advanced servo-hydraulic system, its powerful punching capacity is good for thick sheet punching. Multi-functional for punching, forming, roller-cutting and tapping (option), substantial reduce the stand-by time and increase material utilization. Furthermore, energy saving, high accuracy and high integrated assembly construction, efficient reduce maintenance cost.



◆ 德國H+L油壓系統



高集成結構及動力單元更小型化，比傳統油壓系統節省30%液壓油，這每年可以有效降低維護成本及節省使用者的消耗成本。
High integrated assembly construction and compact drive system, reducing 30% hydraulic oil, annually reducing maintenance cost and save consumption cost greatly.

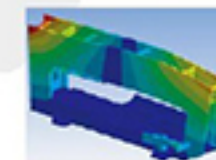
◆ O型龍門型架構 Closed O Shape Frame Structure

高剛性、高穩定性 High Rigidity & High Stability

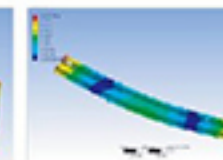
- O型龍門型架構設計。機體結構經“有限元素分析”，以模擬機器之應力/應變情況，達到最佳化的結構設計。
- The closed O shape frame structure is analyzed by the "Finite Element Analysis" software to simulate stress / strain conditions to enable the optimal structure design

高強度鋼材結構 High Tensile Strength Steel Construction

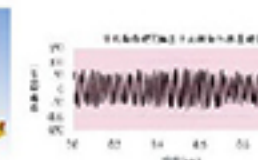
- 機體結構採用高強度鋼材焊接而成。加工前再經過高強度張力測試、正常化處理、震動應力消除，以確保機器之組裝精度。
- The machine frame is welded by high tensile strength steel, which is subject to high tensile strength tests, normalization treatment and vibration stress relief so as to ensure the machine assembling accuracy.



Transient State Analysis



Static Analysis

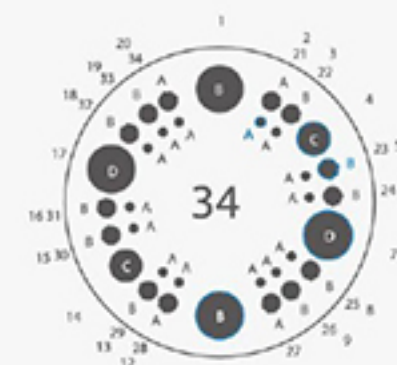


Model Analysis



Transient State Analysis

◆ 34 刀站刀盤 Turret with 34 Stations



- 採用蝸桿/蝸輪傳動設計。雙軸同步連桿傳動，定位安全可靠。
- 刀盤具有 34 刀站。可使用 1/2"~3-1/4" 之刀具。並可依客戶需求，自行變更刀具。
- 各刀站可使用各種廠牌刀具，如 Mate 及 Wilson。
- 雙環式刀盤設計

34 刀站 stations		
形式 Type	規格 Specification	數量 Qty
A	1/2"	18
B	1-1/4"	10
C	2"	2
D	3-1/2"	2
自動轉刀 Auto Index		
B	1-1/4"	2

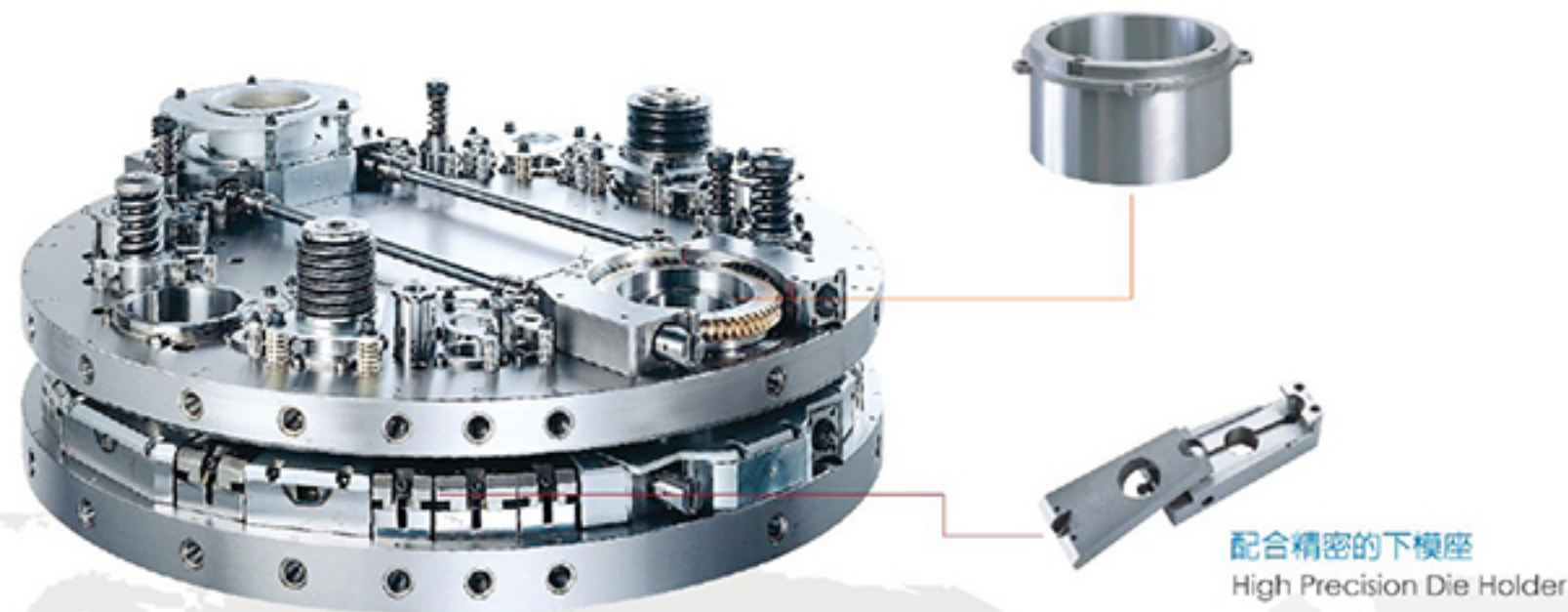
- The turret is transmitted through the worm and worm gear mechanism. Two shafts are synchronously transmitted via a connecting rod for safe and dependable positioning.
- The turret is designed with 34 stations, and accommodates various tool sizes from 1/2" to 3-1/4". Changing tool size is available upon customer request.
- Designed with two circular track stations.

◆ 可替換式刀站襯套 **Replaceable Bushing**

維護保養簡易 Easy to Maintain



- 各刀站均裝置可替換式襯套，具高強度及耐腐蝕特色。不需拆卸整組刀盤，即可維修。除了可縮短保養工時，並可節省維修費用。
- Each tool station is equipped with replaceable bushing that features maximum durability and wear-resistance. Easy to replace without dismantling the entire turret. This not only shortens maintenance time but also saves maintenance cost.



◆ 移動式沖頭 **Movable Ram**



- 移動式沖頭，具有過載保護特性。配合雙環式刀盤，讓加工更具彈性。
- Movable ram has overload protection, combined with a two circular track stations, making operation more flexible.

◆ 節能系統 **Energy Saving System**



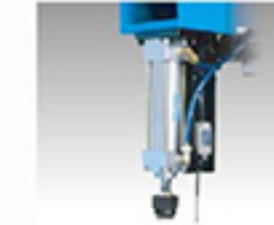
- 高低壓與差動迴路系統設計，使油壓動力單元更小型化，比傳統油壓系統節省30%液壓油，並且縮小整機占地面積，除此之外亦可降低能源的消耗。
- Differential circuit system with High/Low voltage, minimize hydraulic unit, less than 30% hydraulic oil comparable typical hydraulic system. The compact size can reduce energy consumption.

◆ 換爪壓缸 **Repositioning Cylinder**



- 換爪壓缸採用 CNC 程式控制，換爪動作快速精準，以確保加工精度。
- The repositioning cylinder is controlled by CNC programs to achieve high speed and accurate repositioning motions, and ensures high machining accuracy.

◆ 鈹件變形偵測裝置 **Sheet Distortion Sensor**



- 此裝置可自動偵測鈹件彎曲。當鈹件變形時，機器自動停機，以避免造成機器與刀具之損壞。
- The sensor provides automatic detection for sheet distortion. Once the sheet distortion occurs, the machine stops automatically to avoid damage to the machine and the tools.

◆ 重負荷型夾爪（專利） **Heavy-duty Clamp (Patented)**

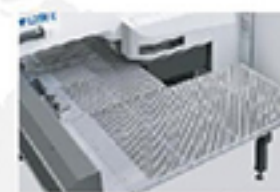
脫料偵測（選配） Sheet Escape Detector (Optional)



- 獨創線軌式夾爪，採用線性滑軌傳動。剛性優異、動作順暢、且提升抗扭矩能力。
- 可裝脫料偵測功能（選配），以提升安全性。
- The exclusively designed clamp moves on linear motion guide, resulting in superior rigidity, smooth movement and improved torque-resistant capability.
- Available to equip with a sheet escape detector for upgrading safety protection.

◆ 鈹件防刮裝置 **Scratch-Free Devices**

大毛刷台面（選配） Large Brush on Table



- 除了可降低加工時之噪音，並且減少鈹件刮傷，具防刮功能。
- Provide noise reduction during operation and prevents the sheet from scratching

下模座防刮刷毛 Die Holder Brush



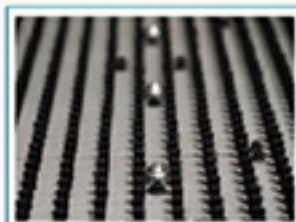
- 下模座附有可替換式刷毛，以降低鈹件刮傷的可能性。
- The die holder is equipped with brush for reducing the possibility of sheet scratch.

換爪壓缸檔塊下沉裝置（選配） Block Lowering Device (Optional)



- 檔塊只在換爪時才會上升，平時是低於刷毛表面。因此可避免與鈹件接觸而造成刮傷。
- The block raises only when repositioning. In normal condition, the block positions itself under the brush to prevent sheet scratching due to a contact with the block.

◆ 台珠上升機構 Sporting Ball Set



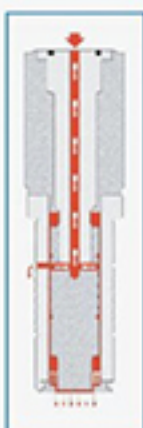
- 使銲件之上料與下料更輕鬆、更快速。
- The sporting ball set makes sheet loading and unloading effortless and quick.

◆ 避震腳墊 Anti-vibration Foot Mounts



- X、Y 軸頻繁的加減速造成對滾珠螺桿的衝擊，可藉由避震腳墊加以緩衝。
- 附有水平調整功能。
- With the use of anti-vibration foot mounts, the impact on the ball screw caused by frequent acceleration / deceleration on X, Y-axis can be effectively cushioned.
- With leveling adjustment function.

◆ 刀具自動潤滑系統 Automatic Tool Lubrication System



- 潤滑系統採用程式控制的油霧系統，提供刀具清潔、冷卻與潤滑效果。有效提升加工品質，並可延長刀具壽命。
- The lubrication system is a program controlled oil mist system, which provides cleaning, cooling and lubrication to tools, that help to upgrade machining quality and extend tool life as well.

◆ 攻牙系統 (選配) Tapping System (Optional)



- 高速雙伺服驅動剛性攻牙系統。
- 單孔攻牙可於 1~2 秒內完成。
- 可選擇 M6 以下之公、英制牙。
- 附攻牙刀快拆模組，可快速更換刀牙。
- 附自動潤滑系統，以延長牙刀使用壽命。
- High speed dual servo driven rigid tapping system.
- Single hole tapping is fast accomplished within only 1~2 seconds.
- Choice of metric and imperial threads under M6.
- Equipped with quick release tool module for quick change of tap.
- Equipped with automatic lubrication system to extend the lifespan of tool.

◆ 日本 FANUC 控制器 Japan FANUC Controller



- ES 13 搭載 FANUC 新一代 Oi-PD 沖床專用高速、高精度控制器，配合全新操作面板設計，具有簡易的操控特性。
- The ES13 is equipped with a FANUC Oi-PD controller, designed specifically for punch press with the all new control panel design provides easy operation control.

◆ CAD / CAM 軟體 CAD / CAM Software



- Windows 版本之操作畫面，使操作者可快速上手。並可簡化加工程式編輯。
- The Windows operation displays enable the operator to learn in a short time. Also, machining program editing is simplified.

◆ 控制器 Controller

台勵福自行開發的即時 Linux 系統，具有下列優點：
The Tailift self-developed real-time Linux system integrates following benefits:

- 利用加減速控制、伺服控制及誤差補償以提升加工精度，縮短加工時間。
- 多軸控制及複合製程，以減少加工程式，達到高速、高精度、高效率之加工。
- With the use of acceleration / deceleration control, servo control and error compensation to increase machining accuracy and shorten machining time.
- Multi-axes control in combination with complex process help to reduce machining programs and result in high speed, high accuracy and high efficiency machining.

規格表 Specifications

項目 Item	單位 Unit	RH27
沖壓噸數 Punching Capacity	公噸 Ton	30
X軸行程 X Traverse Length	公厘 mm	2490 ± 10
Y軸行程 Y Traverse Length	公厘 mm	1525 ± 10
最大加工板件尺寸 Max Sheet Size	公厘 mm	1525*4980
最大加工板件厚度 Max Sheet Thickness	公厘 mm	6.35
工件最大質量 Max Mass of Material	公斤 kg	110
X軸最大移動速度 X Axis Traverse Speed	米/分鐘 M/min.	80
Y軸最大移動速度 Y Axis Traverse Speed	米/分鐘 M/min.	70
最大移動速度 Max Traverse Speed	米/分鐘 M/min.	105
最大沖孔速度(孔距 25mm) Punching Speed at 25mm pitch	下/分鐘 hits/min.	280
營養速度 Nibbling Speed	下/分鐘 hits/min.	600
刀具型式 Tool Type		長型 Thick turret
沖孔最大孔徑 Max Punching Diameter	公厘 mm	88.9
刀站總數 Number of Tool Stations		34
自動轉刀刀站數 Number of Auto Index Stations	支(型式) pcs(type)	2 B
刀盤轉數 Turret Rotating Speed	轉/分鐘 rpm	30
自動轉刀轉數 Auto Index Rotating Speed	轉/分鐘 rpm	50
沖錘行程 Ram Stroke Distance	公厘 mm	0-31
工作台型式 Working Table		滾珠+刷毛 / ball+brush
夾爪數 Number of Sheet Clamps	支 pcs	3
電力供應 Power Supply	KVA	11
氣壓供應 Air Supply	NL/min	250
氣壓壓力 Air Press	bar	5
油箱容量 Oil Tank Volume	公升 Litre	180
機器尺寸(長×寬×高) Machine Dimension (L x W x H)	公厘 mm	5050*5200*2168
機器淨重 Net Weight (approx.)	kgf	14,000
分離式電控箱尺寸 Size of Control Cabinet	公厘 mm	1100*535*1980
CNC控制器 CNC Controller		FANUC Oi-PD
可控制軸數 Number of Controllable Axes	軸 Axis	4+1
RAM記憶容量 RAM Memory	KB	512
傳輸界面 Serial Interface		RS232
定位精度 Punching Precision	公厘 mm	± 0.1
重複定位精度 Reposition Precision	公厘 mm	0.05

- 產品規格若有變動，恕不另行通知。 Specifications are subjects to change without prior notice.
- X/Y 軸的加減速度依工件的重量而定。 Acceleration / deceleration rate of X / Y-axis are dependent on weight of materials.
- 沖孔速度依不同的加工條件、沖錘行程、加速度及軸的速度而定。 Punch speed depends on processing conditions, stroke length, acceleration / deceleration rate of axes speeds.

佔地面積圖 Floor Space

