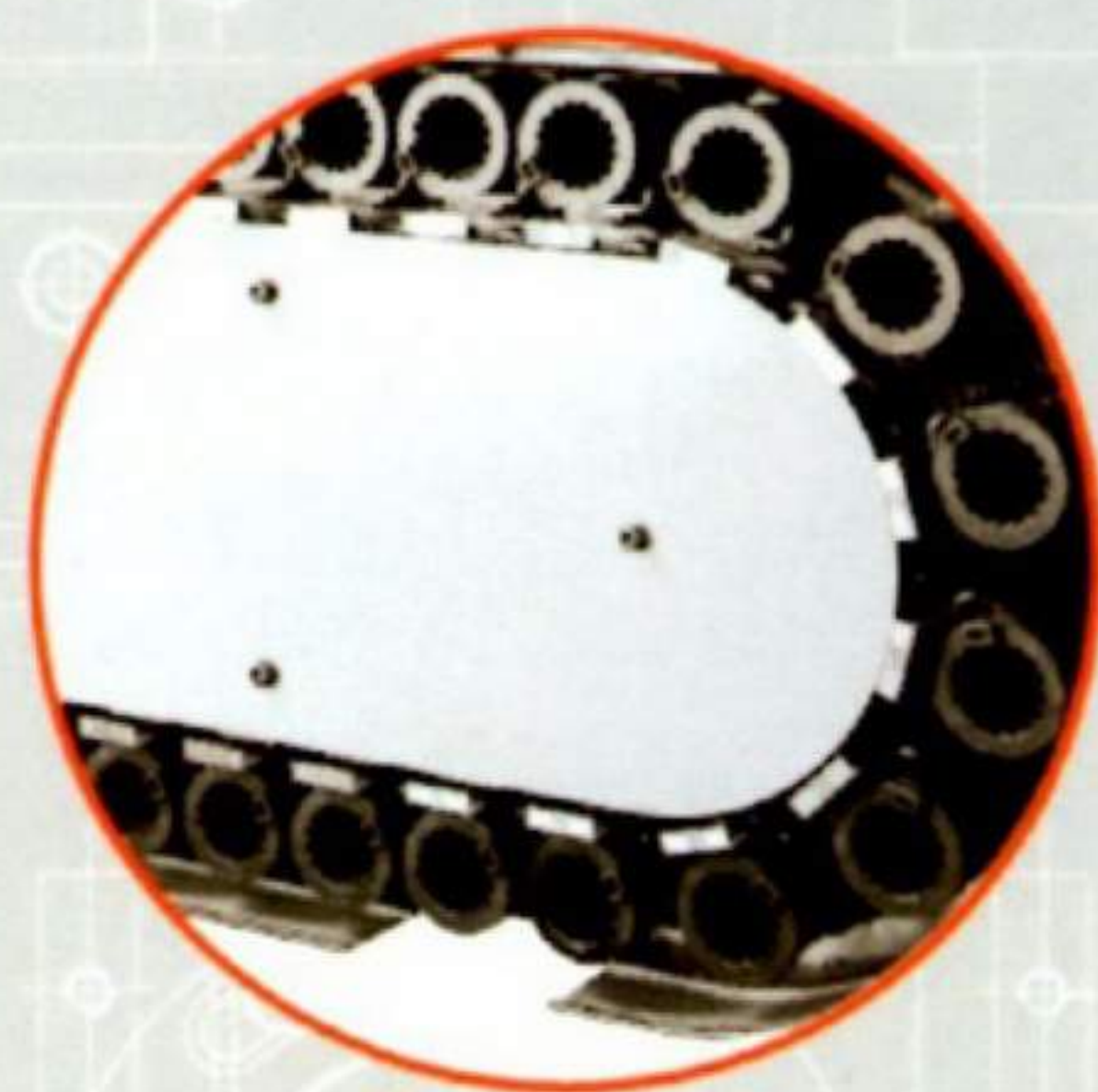


SUN

Master in technology Pursuing extreme perfection

CNC AUTO TOOL CHANGER SYSTEMS



- With over 28 years experience, we are considered Masters in designing and processing Automatic Tools for machinery.
- Chen Sound Industrial Co., Ltd became the first manufacturer to integrate the design and manufacturing of Auto Tool Changer systems.
- We have an established and experienced R&D team which is dedicated to the design of Automatic Tool Changer (ATC) systems and have a complete machining center and other relative machining accessories.
- In our 28 year history, we have created partnerships with our customers through a results oriented approach of sincerith, professional service and state of the art technology.
- We provide flexible customization to supply our customer's with their requirements.
- We have received patents on many of our products and were also ISO 9002 certified in 2003.
- We insist on a philosophy of "Honesty", "Professionalism" and "Responsibility" to provide the customer with best possible service.

Main Products

- Disc Type ATC
- Drum Type ATC
- Chain Type ATC
- Umbrella Type ATC
- Horizontal Type ATC
- Vertical Lathe type ATC / Turning Milling Type ATC
- Double Column / Flat type ATC
- Accessories (Unclamping ,Hydraulic Unclamping ,Hollow Hydraulic Unclamping Cylinder, Booster.....etc.)

- 臻賞工業股份有限公司成立於1980年，以豐富之加工經驗，自動化機具設計製造為基礎，優良之研發團隊，致力於CNC自動換刀系統之刀庫機構及相關機械配件之系列產品領域研發製造。
- 有多項產品榮獲國內外之專利憑證，同時也在2003年通過ISO9002國際品質認證。
- 我們可接受客戶特殊規格之刀庫訂製，為國內首家對自動換刀系統能做整合規劃之設計製造商。
- 本公司已有將近30年的歷史，多年來我們一直堅持提供誠摯與專業的服務及先進的技術，與客戶創造長期合作夥伴之關係，持我們的經營信念（誠實）、（專業）、（負責）為客戶提供最佳的服務。

主要生產產品有

- 圓盤式刀庫
- 斗笠式刀庫
- 鏈條式刀庫
- 傘型刀庫
- 臥式刀庫
- 立車刀庫/複合式加工機刀庫
- 龍門/平置式刀庫
- 配件（增壓打刀缸，油壓打刀缸，中空油壓打刀缸，增壓器等）



打刀缸系列 CYLINDER SERIES



增壓器 Booster

- 可取代小流量之油壓單元(如CNC主軸鬆刀機構、各種夾具類、剎車定位系統)提供各種不同規格需求。
It can replace the smaller flow hydraulic unit (e.g.CNC spindle-unclamping,jig fixture,brake positioning system) for providing defferent specifications.

W-1000

規格說明 Specification :

增壓倍數 Output pressure:10kg/cm²~250kg/cm²
輸出油壓 Oil output:5cm²(5cc)~1000cm³(1000cc)mm
空氣壓力需求 Air pressure requirement: 5~6kg/cm²

油壓打刀缸 Hydraulic Unclamping Cylinder

- 材質採高密度鑄鐵及無縫鋼管，強度足、不漏油，打刀碰塊採整螺栓可調式設計，活用性高，油壓式打刀缸可配合增壓器使用，即使在空壓系統中亦可使用。
It is made of high density cast iron and seamless steel pipe in providing stronger strength and keeping form leaking.
The unclamping hammering block is designed in adjustable screw for higher flexibility.
The hydraulic unclamping cylinder can be matched with the booster.Pneumatic source is even appliable.

H-1000

Model NO.

∅120*20L

規格說明 Specification :

打刀力
Booster force:5000kg~6600kg
打刀行程
Stroke:20mm
油壓壓力範圍
Oil pressure requirement:45~60kg/cm²
適用於
Apply:50#



H-2000

Model NO.

∅90*16L

規格說明 Specification :

打刀力
Booster force:2700kg~4200kg
打刀行程
Stroke:16mm
油壓壓力範圍
Oil pressure requirement:45~60kg/cm²
適用於
Apply: 40#



中油壓打刀缸 Hollow Hydraulic Unclamping Cylinder

- 此打刀缸專為CTS(中央出水結構)設計，可配合增壓器使用，即使在空壓系統中亦可使用。
This cylinder is designed for CTS(coolant through spindle) system for using with the booster. Pneumatic source is even appliable.

PMC-1000

Model No

∅120*12L/ ∅120*14L

規格說明 Specification :

打刀力 Boost force: 2400kg~6400kg
打刀行程 Stroke:12mm,14mm
油壓壓力範圍 Oil pressure requirement:30~80kg/cm²
適用於 Apply: 40#,50#



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打刀缸系列 CYLINDER SERIES

■ 增壓打刀缸Unclamping Cylinder

G-4000

- 品質穩定、技術純熟，佔台灣市場95%。
With reliable quality and sophisticated design, it owns 95% of the market share in Taiwan.

規格說明 Specification:

增壓出力 Booster force: 2000kg~6000kg
行程 Stroke: 10~17mm
空氣壓力需求 Air pressure requirement: 5~6kg/cm²



G-5000

- 新型快速型退刀缸，以獨家專利預壓設計方式，大幅縮短換刀時間。

規格說明 Specification :

增壓出力 Booster force: 2000kg~6000kg
行程 Stroke: 10~17mm
空氣壓力需求 Air pressure requirement: 5~6kg/cm²

G-6000

- 使用曲軸式槓桿原理，出力大、速度快、免油壓、不漏油、使用壽命長、故障率低。
Curve axle lever principle designed ensures stronger output, faster speed, hydraulic oil free and no leakage, which has longer life in running cycle and lower failure rate.

規格說明 Specification :

增壓出力 Booster force: 4000kg~6000kg
行程 Stroke: 12mm
空氣壓力需求 Air pressure requirement: 6kg/cm²

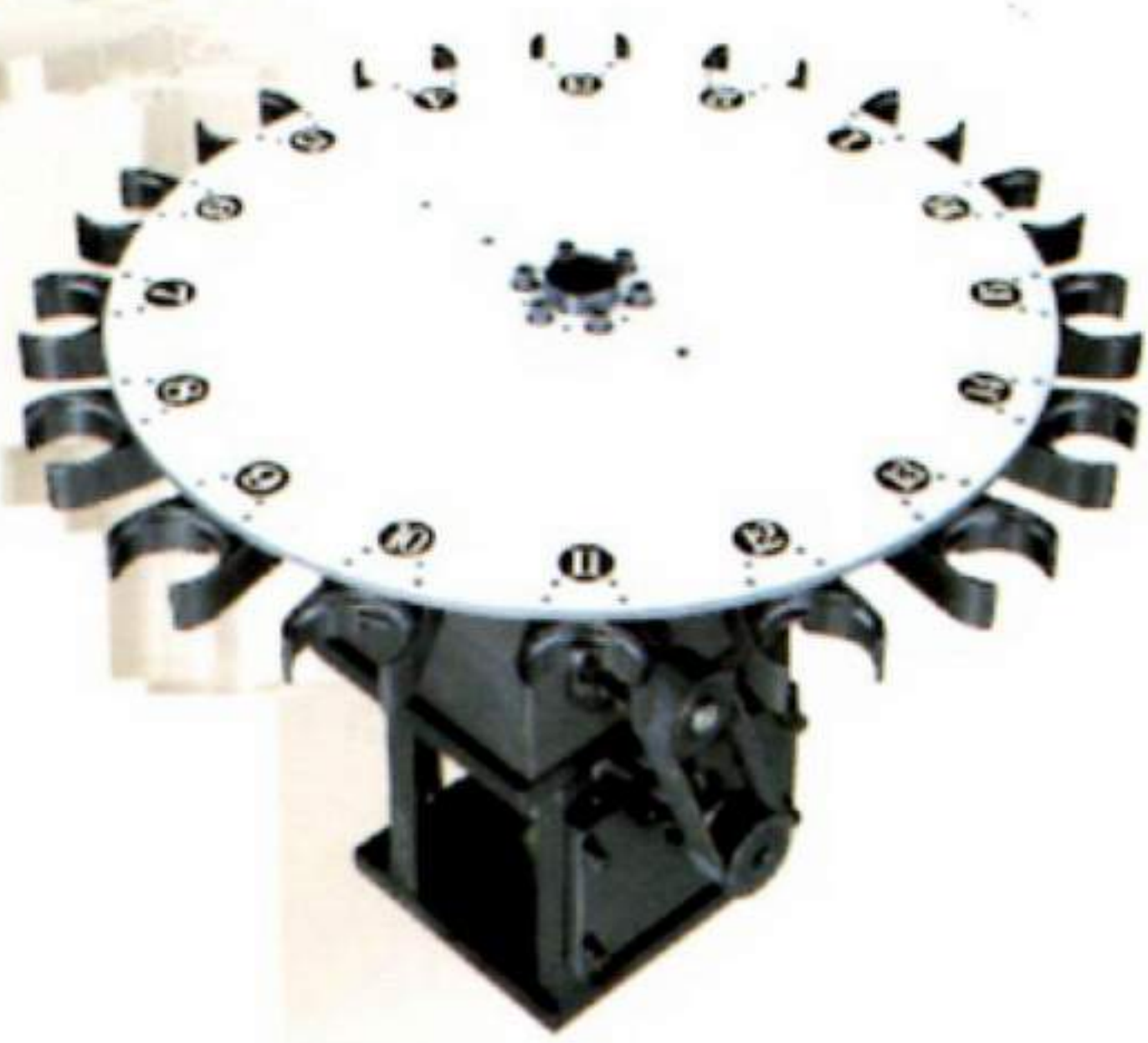


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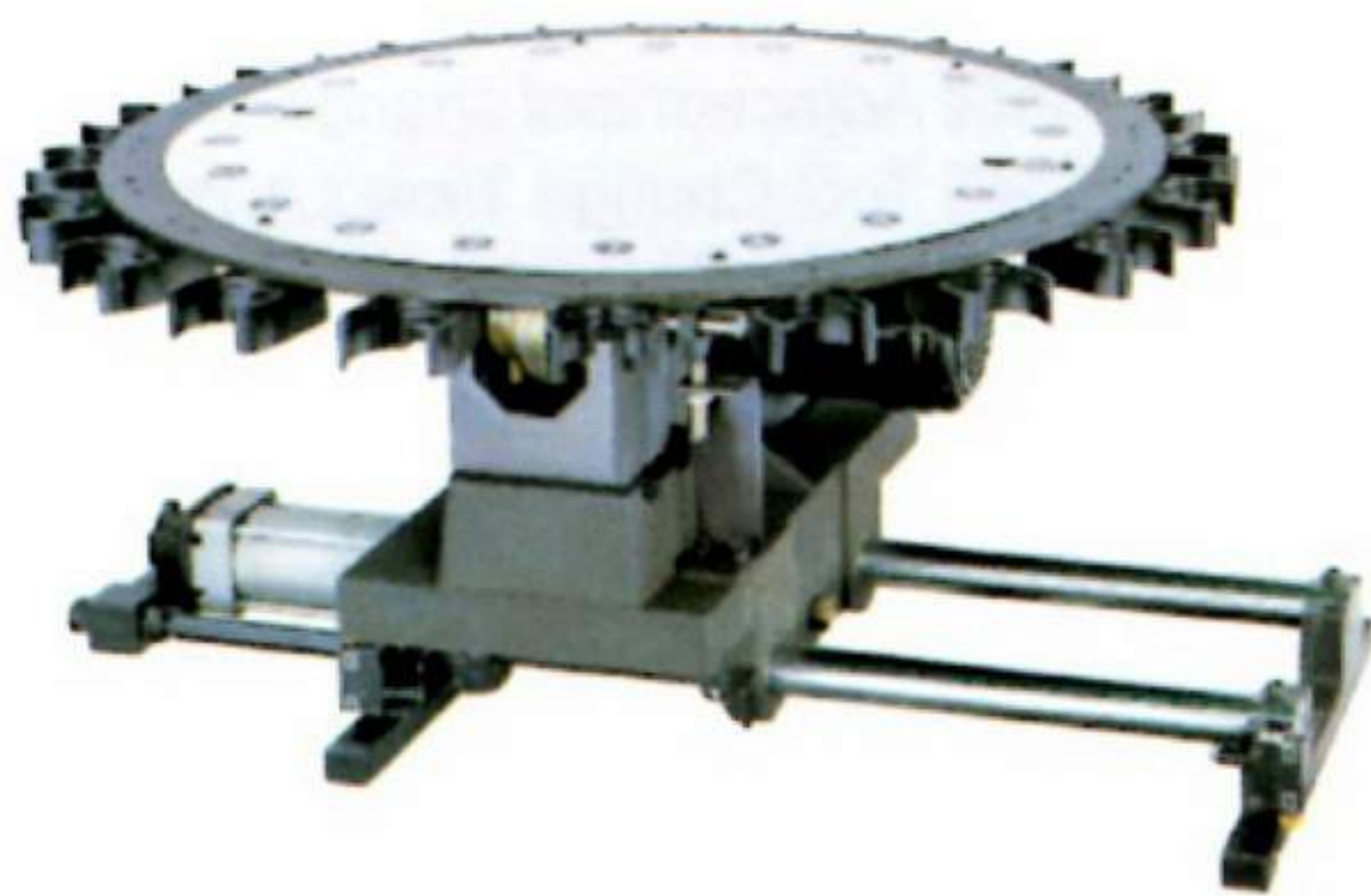
傘型刀庫

UMBRELLA TYPE ATC



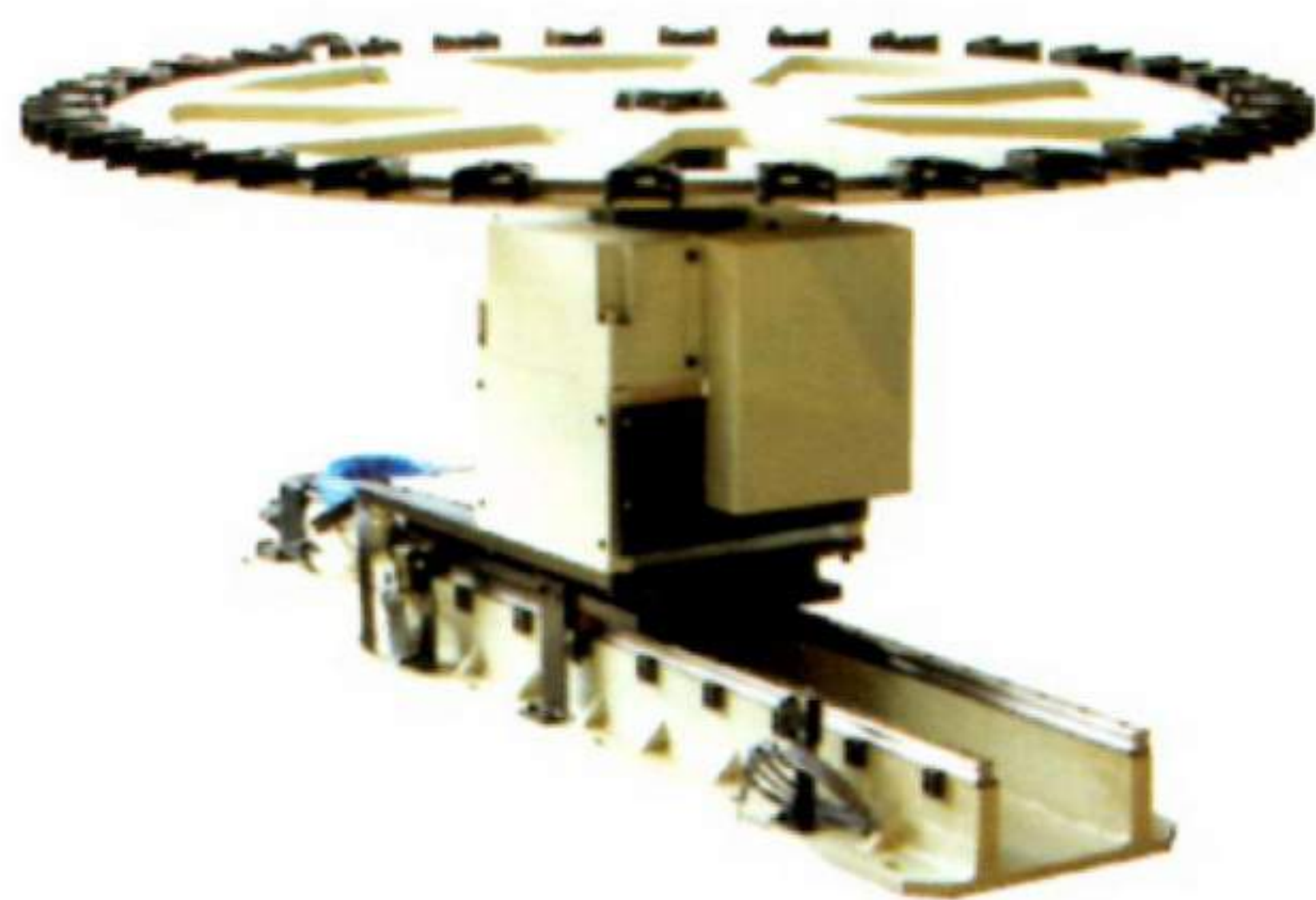
30#

刀具數 Tool Nos. : 6T~30T
 刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
 鄰刀時間 Adjacent tool change time : 0.7sec
 最大刀重 Max. Tool weight : 5kg
 最大刀長 Max. Tool length : 300mm



40#

刀具數 Tool Nos. : 6T~30T
 刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
 鄰刀時間 Adjacent tool change time : 0.9sec
 最大刀重 Max. Tool weight : 7kg
 最大刀長 Max. Tool length : 350mm



50#

刀具數 Tool Nos. : 6T~30T
 刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
 鄰刀時間 Adjacent tool change time : 1sec
 最大刀重 Max. Tool weight : 15kg
 最大刀長 Max. Tool length : 400mm

特點Features:

- 1▲ 夾刀爪為工程複合塑膠,夾刀力量穩定包覆性佳,不當換刀時可保護主軸與刀盤。
 Gripper is made from engineering compound material, with stable tool clamping force, good surrounding and can protect spindle and tool disc during tool changes under abnormal situation.
- 2▲ 配合客戶機台設計空間,刀庫可為固定式或往覆式。
 Can produce either by fixed style or stroke style to fit cutomers machine size
- 3▲ 刀盤驅動源為精密電動馬達,鄰刀快速選刀(0.6秒)
 The tool disk drive power from precision electricity motor, rapid adjacent tool change time (0.6 second)
- 4▲ 刀盤運轉採筒形凸輪設計,運轉順暢、安靜、定位精準。
 The tool disc with index cam design providing smooth movement, quiet and precise fixed position.
5. 刀庫驅動源可搭配伺服馬達及電動馬達。
 The ATC drive power has option of servo motor and electrical motor.



■ 刀夾 Gripper



專利緩衝機構
 Patented design of rear cushion



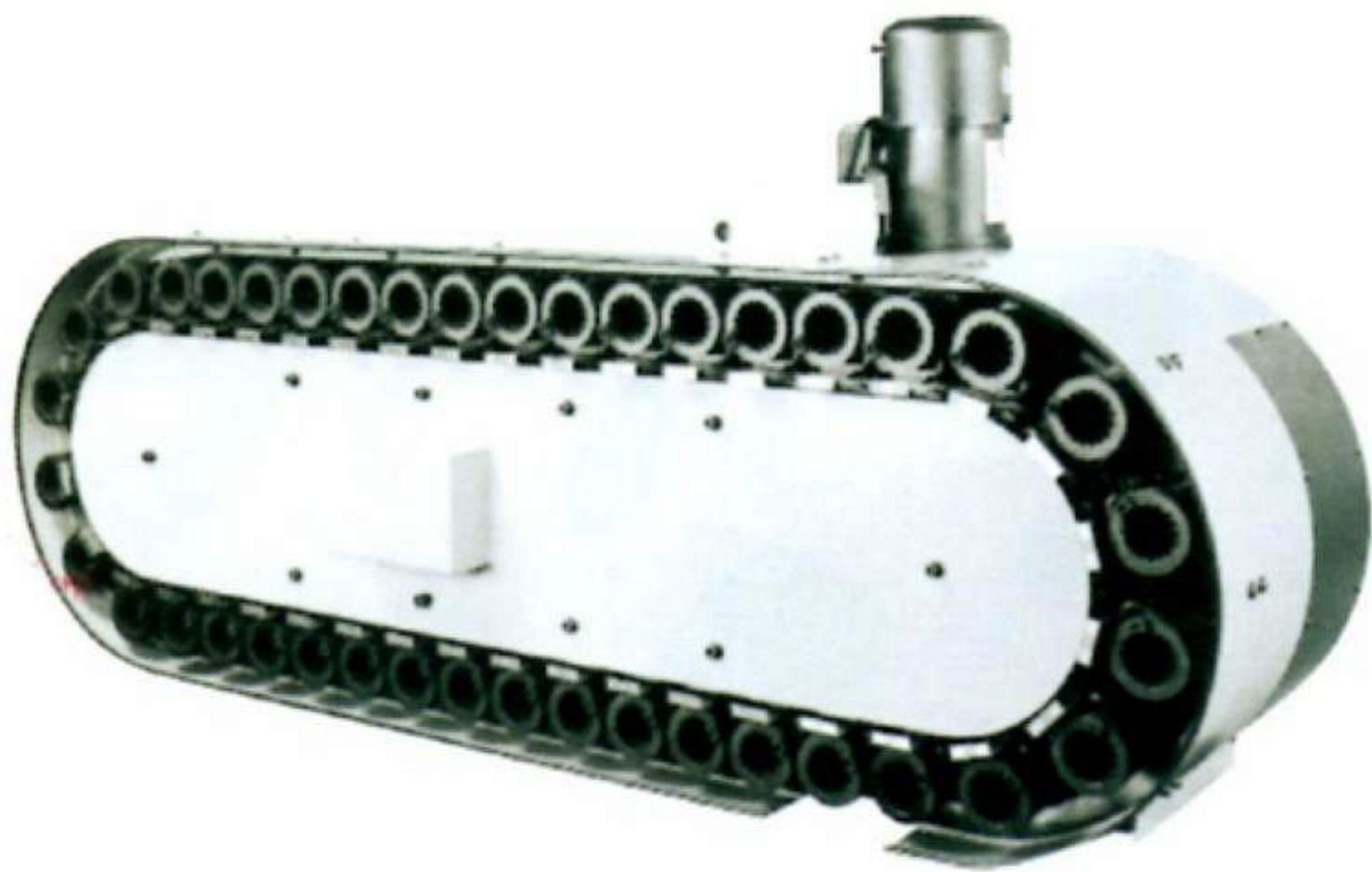
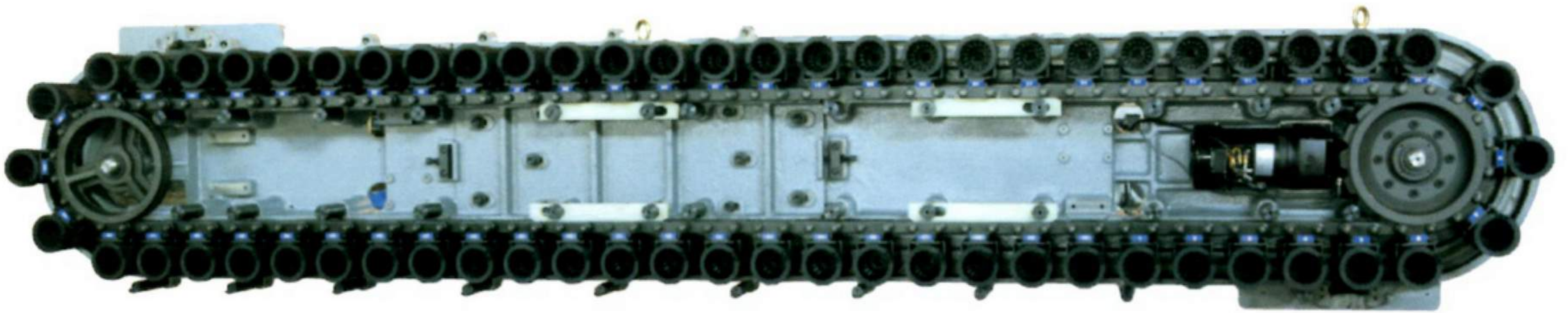
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鏈條式刀庫 CHAIN TYPE ATC

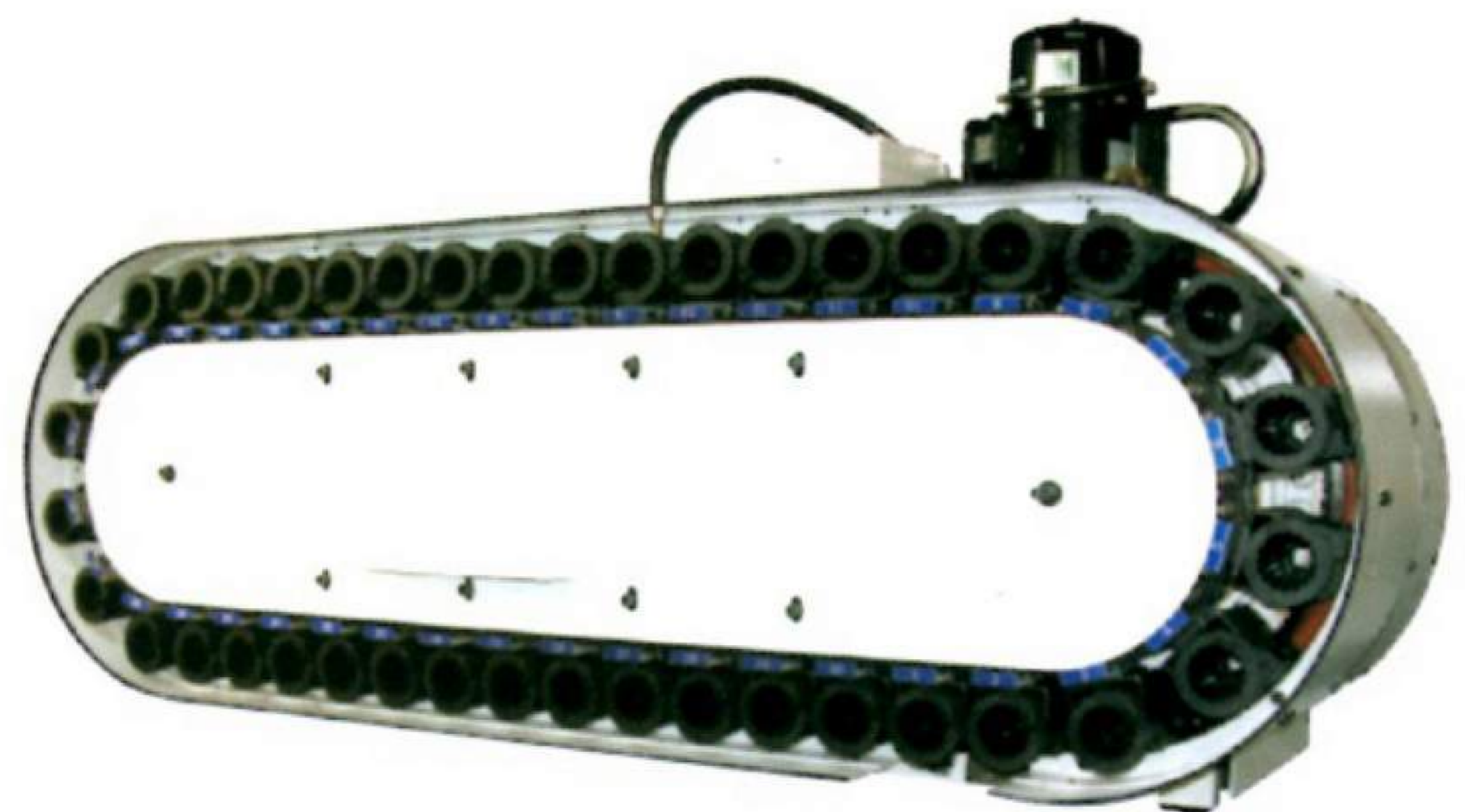
特點Features:

- 1▲ 刀庫刀套採複合工程塑膠,強度高,適用溫度-20C~120C,重量輕,抗老化'腐蝕,正常使用狀況下刀套損壞率接近0%。**
The tool pot material is made from compound engineering plastic material, with high strength, temperature allowance: -20 degree C ~ 120 degree C, light weight, anti-aging, anti-corrosion, under normal operation, the defective rate is nearly 0%.
- 2▲ 鏈條全面雙邊支承,運轉穩定性高,延長鏈條壽命。**
The chain has good support from two sides entirely, with stable rotation and longer chain life time.
- 3▲ 倒刀結構採曲線凸輪設計,倒刀動作順暢,無氣壓時可預防刀套下垂。**
With curve Cam design for the tool pot up down for a smooth motion, to prevent tool pots from falling down even if air pressure fails.
- 4▲ 刀庫結構剛性佳,能承載快速換刀及較大刀重。**
The ATC structure is sturdy to load high speed tool changes and heavier tools.
- 5▲ 鏈條運轉採筒形凸輪設計運轉順暢、安靜、定位精準。**
The chain rotation with index cam design providing smooth movement, quiet and precise fixed position.



40#

刀具數 Tool Nos : 32/40/50/60T
刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
鄰刀時間 Adjacent tool change time : 0.9sec
換刀時間 Tool Change Time : 1.0~1.8sec
最大刀重 Max. Tool weight : 8kg
最大刀長 Max. Tool length : 350mm



50#

刀具數 Tool Nos : 24/32/40/52/60T
刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
鄰刀時間 Adjacent tool change time : 1sec
換刀時間 Tool Change Time : 2.5~3.2sec
最大刀重 Max. Tool weight : 15kg/25kg
最大刀長 Max. Tool length : 400mm



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平置式刀庫 FLAT TYPE ATC

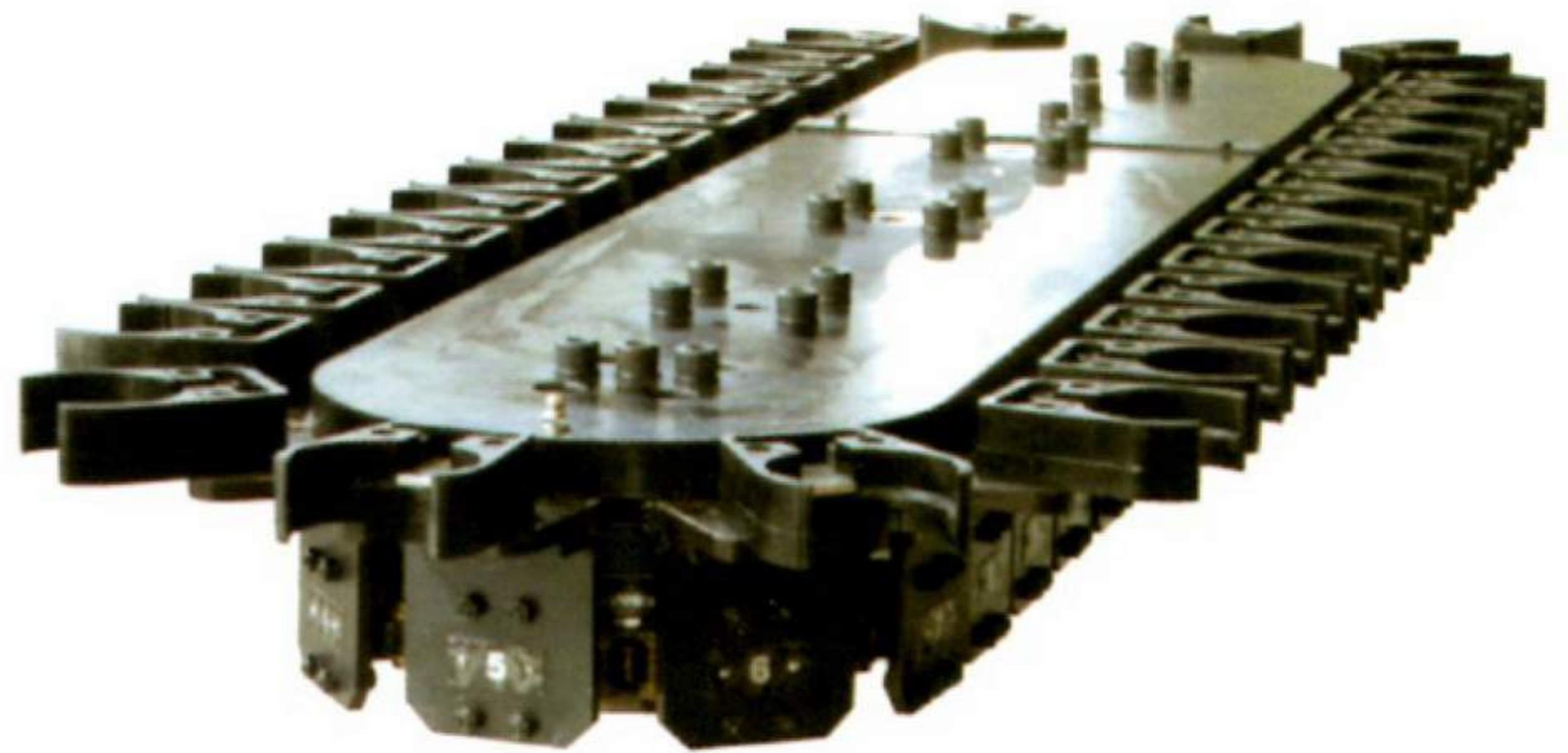
特點 Features:

- 1▲ 夾刀爪為工程複合塑膠,夾刀力量穩定包覆性佳,不當換刀時可保護主軸與刀盤。**
Gripper is made from engineering compound material, with stable tool clamping force, good surrounding and can protect spindle and tool disc during tool changes under abnormal situation.
- 2▲ 鏈條轉接軸承全面雙邊軌道包覆支承,運轉穩順暢,定位精度高。**
The chain has good support from two sides entirely, with stable rotation and longer chain life time.
- 3▲ 特殊夾刀爪的設計可將刀庫使用於臥式換刀。**
With special design of the gripper can change the magazine for horizontal magazine.
- 4▲ 氣壓取刀系統、油壓迴轉系統或市售換刀凸輪皆可配合刀倉使用。**
The atc unit is suitable for air pressure, hydraulic circuit system or cam system.
- 5▲ 刀庫驅動源可搭配伺服馬達及電動馬達。**
The ATC drive power has option of servo motor and electrical motor.



40#

刀具數 Tool Nos. : 32/40/48T
刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
鄰刀時間 Adjacent tool change time : 0.9sec
最大刀重 Max. Tool weight : 7kg
最大刀長 Max. Toollength : 350mm



50#

刀具數 Tool Nos. : 32/40T
刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
鄰刀時間 Adjacent tool change time : 1sec
最大刀重 Max. Tool weight : 15kg
最大刀長 Max. Toollength : 400mm



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圓盤式刀庫 DISC. TYPE ATC

凸輪式換刀結構 Cam ATC System

採剎車馬達驅動凸輪方式，結構簡單，產品成熟可靠。

Brake motor driven cam.

Simple in construction, presenting mature and reliable products.

30#

刀具數 Tool Nos. : 16T~24T(20T)

刀具形式 Tool type : BT/CAT/ISO/HSK/SK series

換刀時間 Tool Change Time : 0.8sec

最大刀重 Max. Tool weight : 5kg

最大刀長 Max. Tool length : 300mm



40#

刀具數 Tool Nos. : 16T~40T(24T)

刀具形式 Tool type : BT/CAT/ISO/HSK/SK series

換刀時間 Tool Change Time : 1.0~1.8sec

最大刀重 Max. Tool weight : 8kg

最大刀長 Max. Tool length : 350mm



50#

刀具數 Tool Nos. : 20T~30T(24T)

刀具形式 Tool type : BT/CAT/ISO/HSK/SK series

換刀時間 Tool Change Time : 2.5~3.2sec

最大刀重 Max. Tool weight : 16kg

最大刀長 Max. Tool length : 400mm



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圓盤式刀庫 DISC. TYPE ATC

特點 Features:

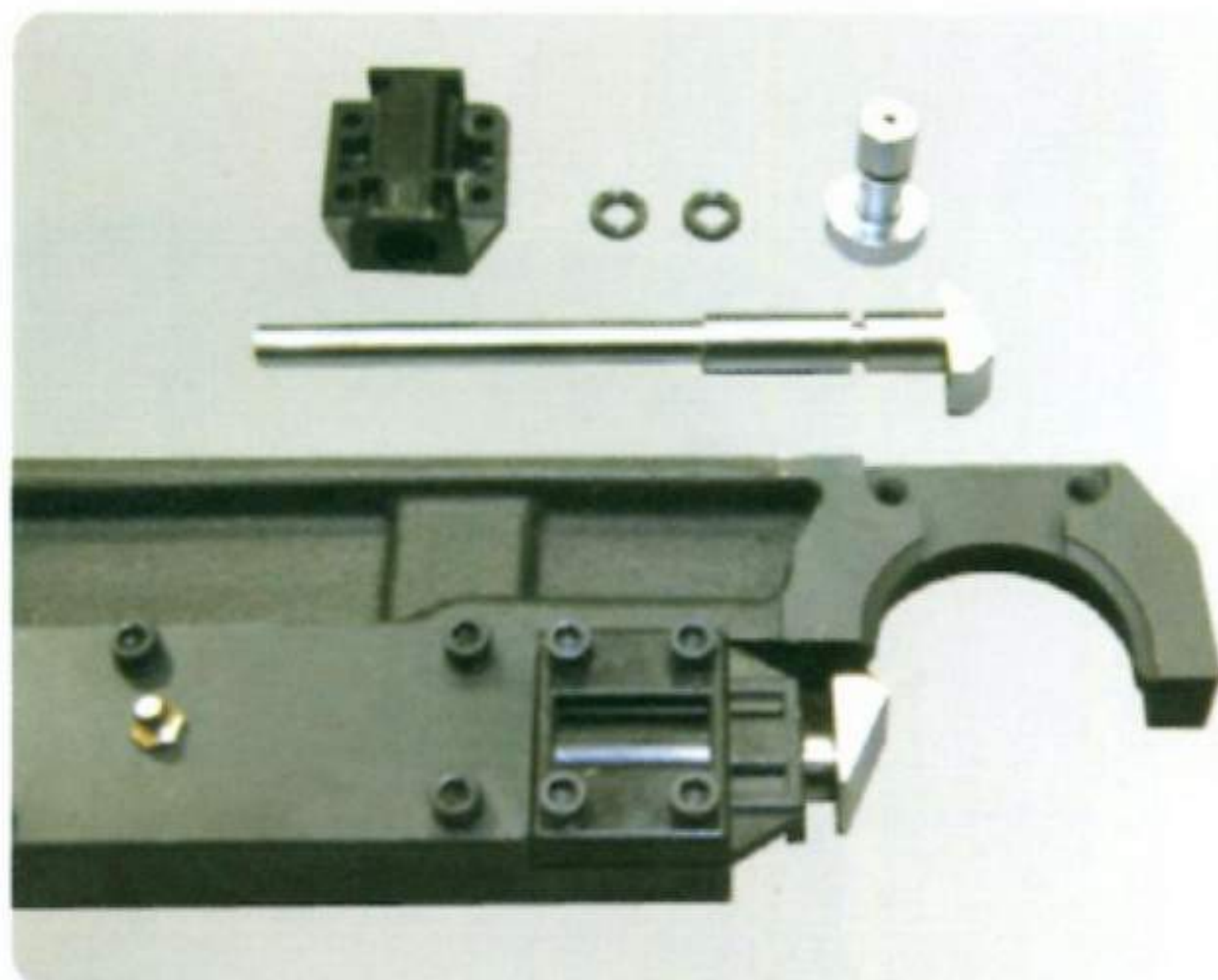
- 1▲ 刀套採複合工程塑膠,強度高,適用溫度-20C~120C,重量輕,抗老化、腐蝕,正常使用狀況下刀套損壞率接近0%。**
The tool pot material is made from compound engineering plastic material, with high strength, temperature allowance: -20 degree C ~ 120 degree C, light weight, anti-aging, anti-corrosion, under normal operation, the defective rate is nearly 0%.
- 2▲ 刀套滑道採用專利設計,刀盤旋轉時低噪音、低震動。**
The tool pot slide with patented design, low noise and vibration at the time of tool disc rotation.
- 3▲ 倒刀結構採曲線凸輪設計,倒刀動作順暢,無氣壓時可預防刀套下垂。**
With curve Cam design for the tool pot up down towards smooth motion, to prevent tool pots from falling down even if air pressure fails.
- 4▲ 刀庫結構剛性佳,能承載快速換刀及較大刀重。**
The ATC structure is sturdy to load high speed tool changes and heavier tools.
- 5▲ 刀盤運轉皆採筒形滾子設計,運轉順暢,安靜,定位精準。**
The tool disc with index cam design, with smooth movement, quiet and precise fixed position.



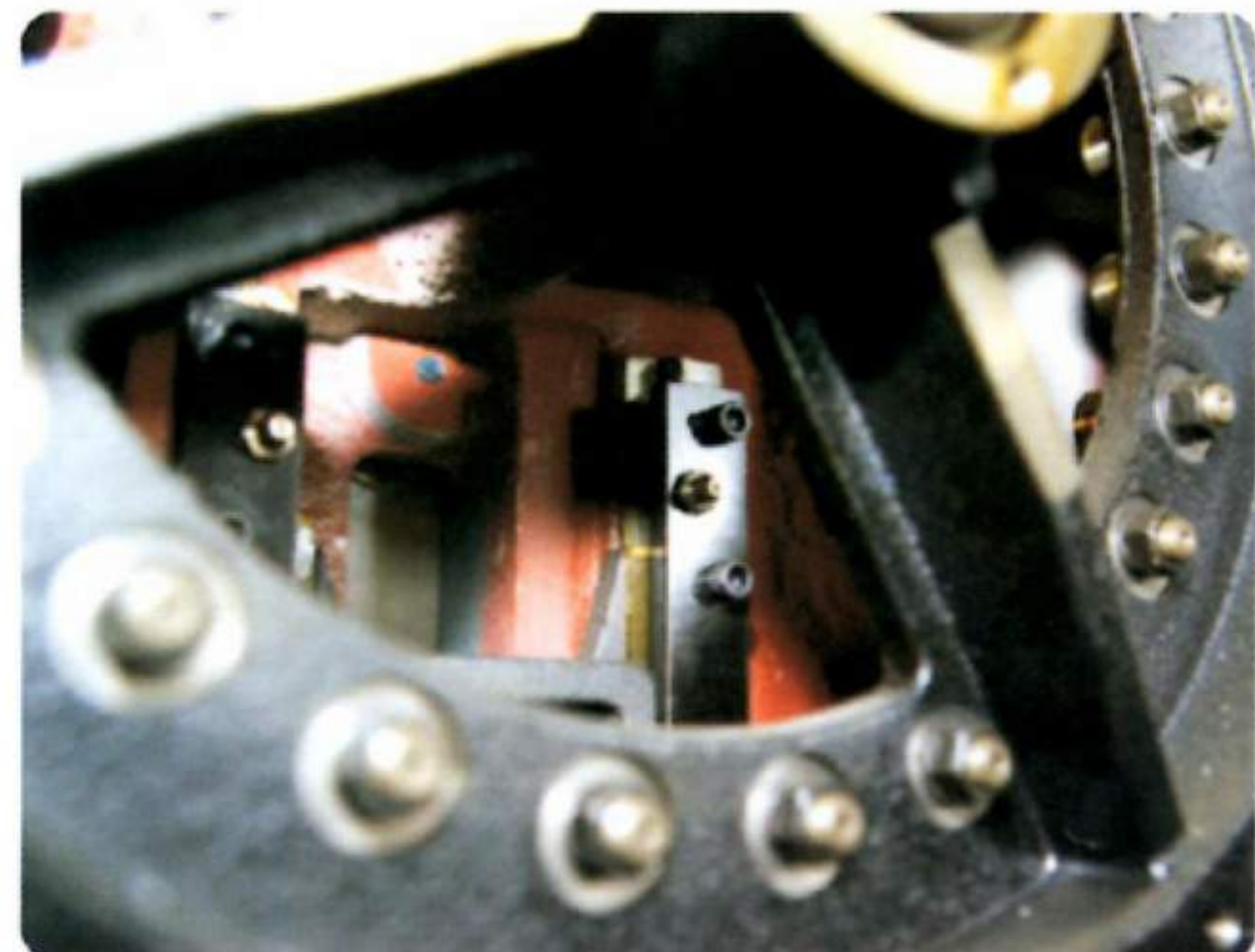
■ 刀套採用高科技之(尼龍加纖)工程複合材料製造
Tool holder is made of high tech engineering plastic (nylon+fiber glass)



■ 曲線凸輪式倒刀結構
Cam swing mechanism



■ 防水防屑刀臂
Arm with water-proof & anti-dust



■ 刀套滑道注油機
Tool potslide-oil pouring hole

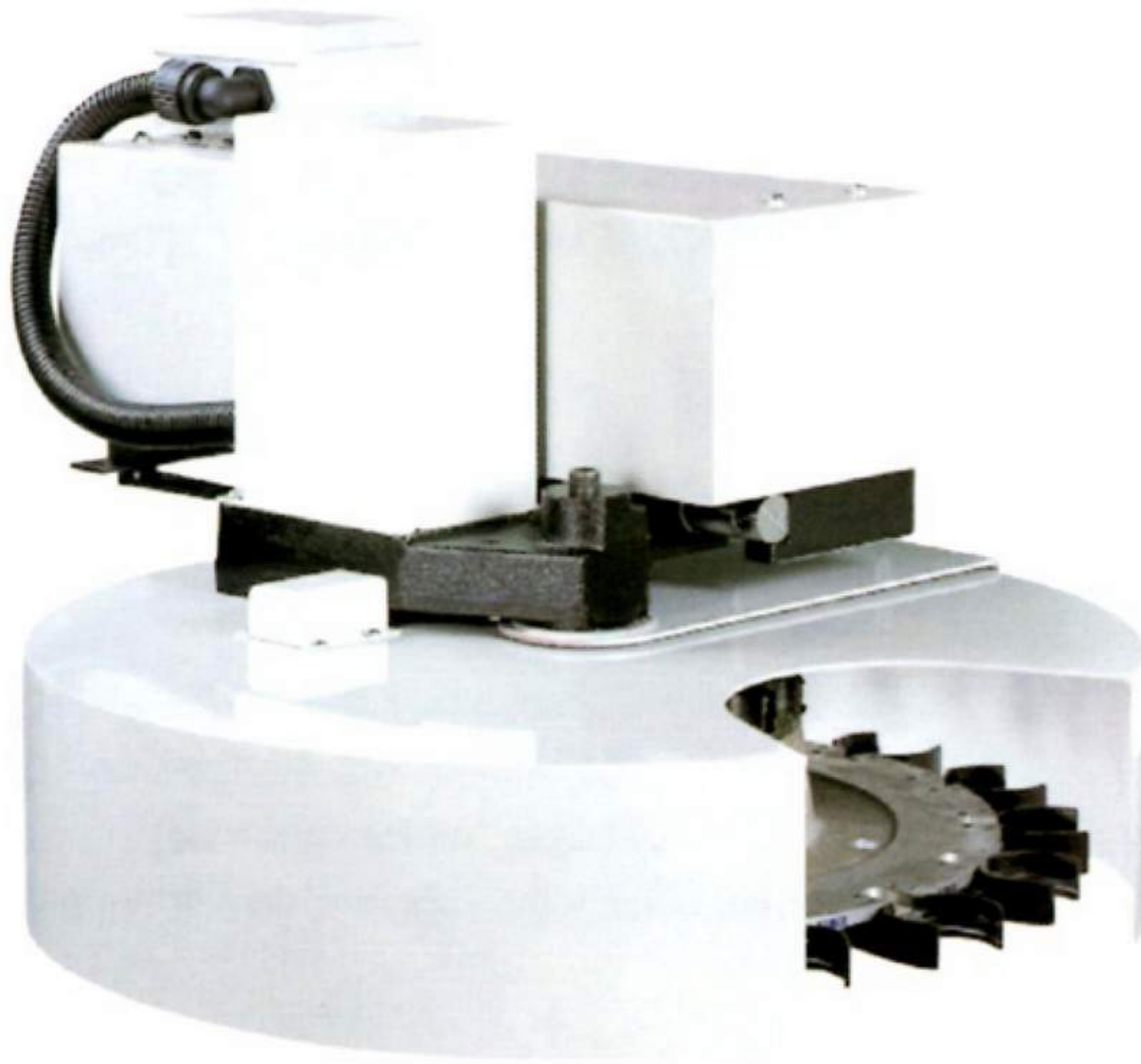


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斗笠式刀庫 DRUM TYPE ATC

■ 滑柱式刀庫 Sliding Rod Type



30#

刀具數 Tool Nos. : 8T~30T(10T)
刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
鄰刀時間 Adjacent tool change time : 0.7sec
往復時間 Drum return time : 1.2~2sec
最大刀重 Max. Tool weight : 5kg
最大刀長 Max. Tool length : 300mm

40#

刀具數 Tool Nos. : 8T~30T(16T/20T)
刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
鄰刀時間 Adjacent tool change time : 0.75sec
換刀時間 Tool Change Time : 1.2~2sec
最大刀重 Max. Tool weight : 7kg
最大刀長 Max. Tool length : 350mm

50#

刀具數 Tool Nos. : 16T~24T(20T)
刀具形式 Tool type : BT/CAT/ISO/HSK/SK series
鄰刀時間 Adjacent tool change time : 1sec
換刀時間 Tool Change Time : 1.2~2sec
最大刀重 Max. Tool weight : 15kg
最大刀長 Max. Tool length : 400mm

特點 Features:

- 1▲ 夾刀爪為工程複合塑膠,夾刀力量穩定包覆性佳,不當換刀時可保護主軸與刀盤。
Gripper is made from engineering compound material, with stable tool clamping force, good surrounding and can protect spindle and tool disc during tool changes under abnormal situation.
- 2▲ 夾刀爪種類齊全且互換性高,提供客戶多種選擇。
A wide variety choice of tool grippers and also interchangeable to provide customers with more options.
- 3▲ 內藏式雙向油壓緩衝專利設計,刀庫往復行程單程(0.8秒)。
Built in with patented design of dual direction of hydraulic cushion, magazine in-out single stroke is 0.8 second
- 4▲ 刀盤驅動源為精密電動馬達,鄰刀快速選刀(0.6秒)
The tool disk drive power from precision electricity motor, rapid adjacent tool change time (0.6 second)
- 5▲ 刀盤運轉有筒型凸輪及日内瓦輪式兩款設計,運轉順暢、安靜、定位精準。
The tool disc have index cam and geneva cam design, with smooth movement, quiet and precise fixed position.



■ 刀夾 Gripper



■ 專利緩衝機構
Patented design of rear cushion



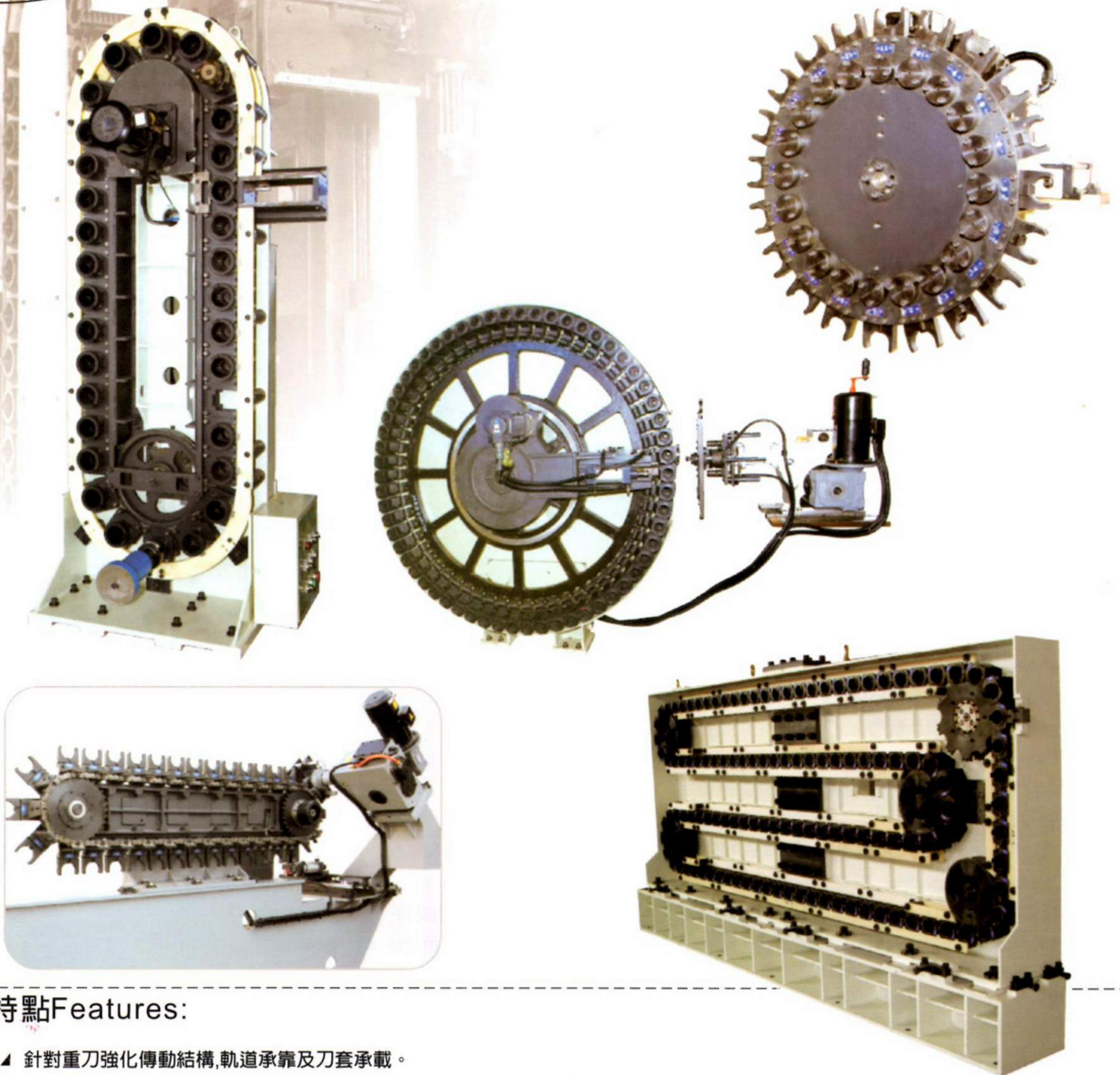
■ 照刀 Empty tool sensor



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TEL:886-4-25624338 FAX:886-425629520
E-mail:info@chensound.com.tw <http://www.chensound.com>

臥式刀庫 HORIZONTAL TYPE ATC



特點Features:

- 1▲ 針對重刀強化傳動結構,軌道承靠及刀套承載。**
Enhance the transmission structure , relevant slides support and tool pots clamping for heavy tool.
- 2▲ 針對重刀、快速換刀及較長換刀臂皆有設計自動鎖刀機構，增加換刀時的穩定度。**
With automatic tool arm locking mechanism for heavy tools, rapid change tools and longer change arms to improve the steady while change tools.
- 3▲ 刀套直接迴轉90度的新型設計,可搭配各種不同ATC系統,使換刀介面更簡略。**
With special design of tool pot 90 degree down , can match with different atc system, simplify the interface adapting parts.
- 4▲ 利用自行研發的設計專利鎖刀機構，將立式刀庫改成簡易型臥式刀庫降低成本。**
With patented design of locking tools arm mechanism, changing the vertical ATC to be simple horizontal ATC to lower the cost.
- 5▲ 刀庫驅動源可搭配伺服馬達及電動馬達。**
The ATC drive power has option of servo motor and electrical motor.



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鑽孔攻牙機

TAPPING TYPE ATC

特點Features:

- 1** TE 30#刀庫於配置規劃和裝配上簡易的特性。

TE 30# ATC systems has the features simple design for drill tapping machine center.

- 2** 新一代同步換刀凸輪結構，配合電控程式設定，即可輕易的發揮快速且順暢換刀動作。

The newly developed simultaneous tool change system of cam construction, by matching with PLC program, can easily change tools .

- 3** 刀庫本體及刀盤採用鋁合金輕量化的設計，可以減輕主軸馬達負載完成高速換刀動作的要求。

The magazine body and tool disc uses light weight material , reduces the loading of spindle motor and enhance tool change.

- 4** 齒輪箱式的傳動結構設計，搭配內藏於傳動箱的原點定位及數刀SENSOR設計，即使刀庫在高溼度、高粉塵的工作環境下，也能擁有穩定的性能及壽命。

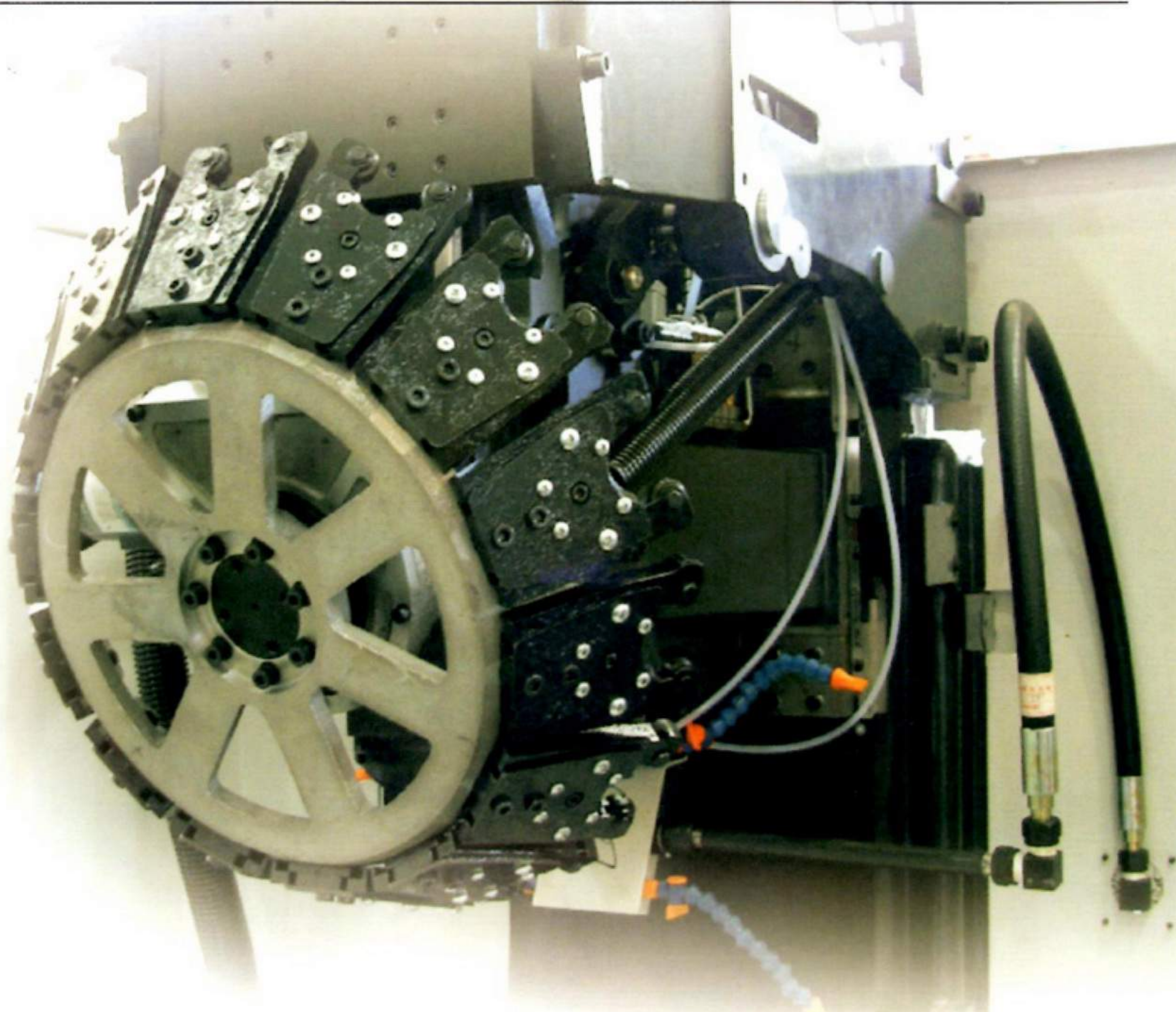
Gear box transmission structure design and sensor stabilize the action and product life on wet 、 chip and dust environment.

- 5** 刀庫傳動分度採用快速準確的筒型凸輪作傳動分度結構，搭載高功率變頻馬達配合變頻器使用，可以擁有更穩定及最佳的刀盤選刀速度，更進一步可以配合控制器來設定刀庫重刀時的轉速以及一般換刀轉速。

The high precise index cam transmission system , with high power motor and inverter ensures more stable and better tool selection speed from tool disc., PLC to set heavy weight tool rotation speed and normal tool weight rotation speed can be written.

- 6** 複合式材質的刀爪，可以確實並準確的夾持刀桿，且擁有易於調整及更換的特性。

Compound materials of grippers, can precisely clamp the tool shank and to adjust or replace.



規格說明 Specification:

刀具容許數 Tools capacity:14T

刀桿型式 Tool Shank: BT-30

單刀最大刀重(Kg)Max. tool weight/Pc (Kg):3.5 Kgs

最大刀長 Max. tool length (mm) :200 mm

最大刀徑 Max. tool dia. (Mm):80 mm

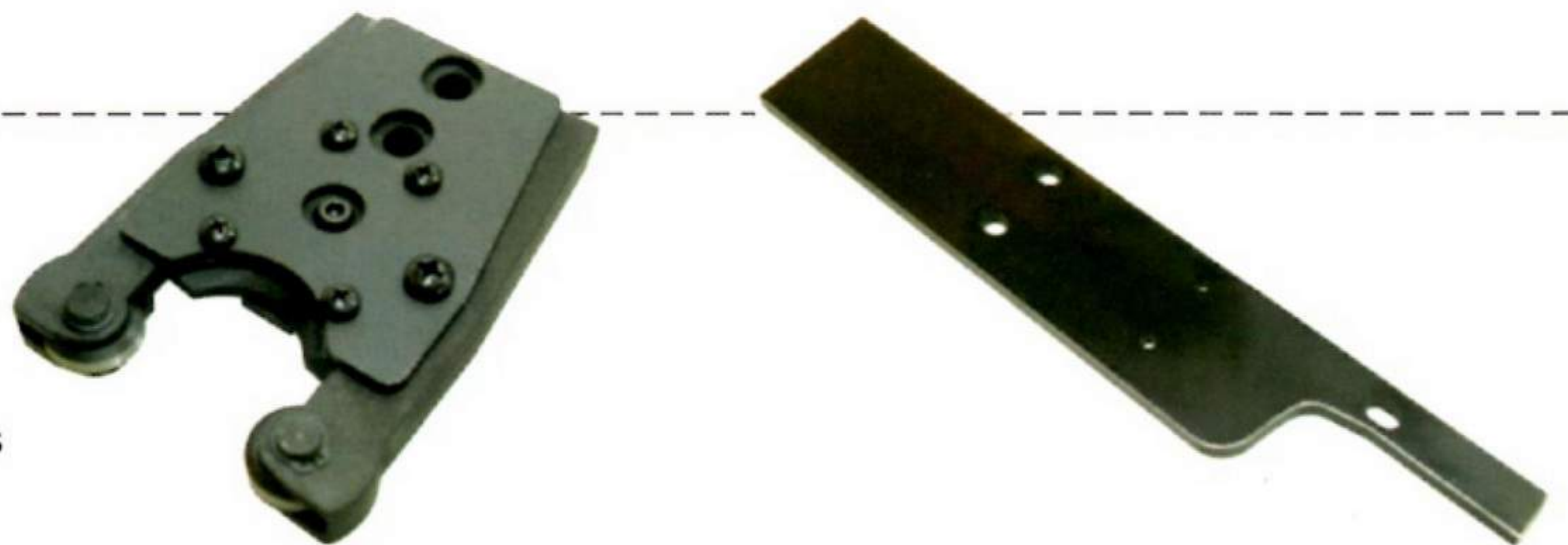
平均負荷刀重Average tool loading weight:2 KG (變頻器最大值:75Hz) (Inverter max Hz: 75Hz).

3 KG (變頻器最大值:60Hz) (Inverter max Hz: 60 Hz)

刀盤全周運轉時間Rotation time of entire tool disc. :5.6 Sec. (變頻器:60Hz) (Inverter : 60Hz)

相鄰刀運轉時間Rotation time for adjacent tools:0.4 secretary. (變頻器:60Hz) (Inverter: 60 Hz)

選刀方式 Tool selection method 可正逆轉選刀(固定刀號)C.W or C.C.W rotation (Fixed Tool Number)



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