



# 同益 銑床 自動進給器 磨床 自動進給器

MILLING · GRINDING POWER TABLE FEEDS

APF-950



APF-750



APF-500



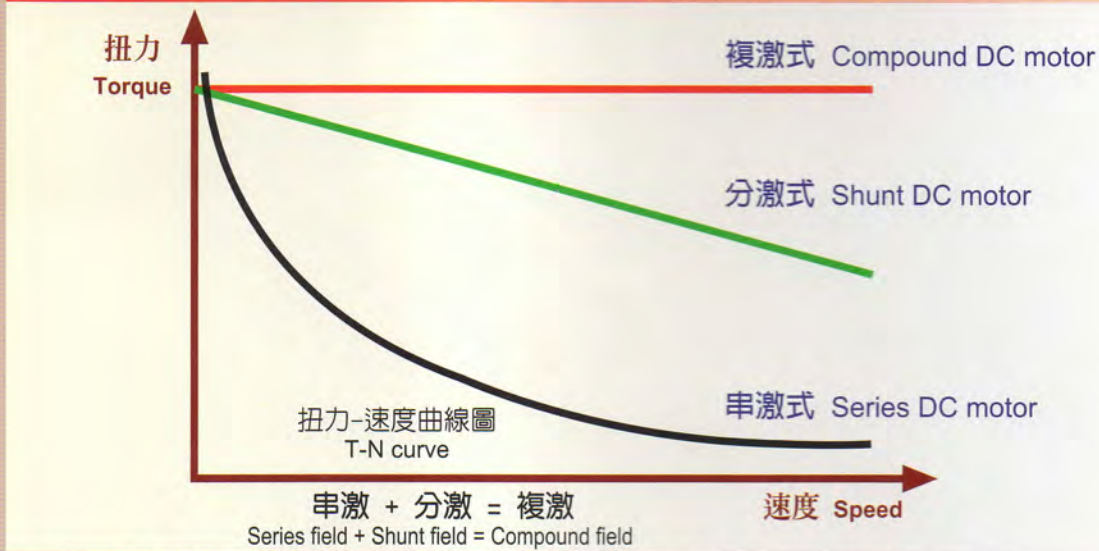
專利品  
Patent

Recognize the benefit of compound DC motor

## 使用自動進給器之前，請先認識直流有刷式馬達

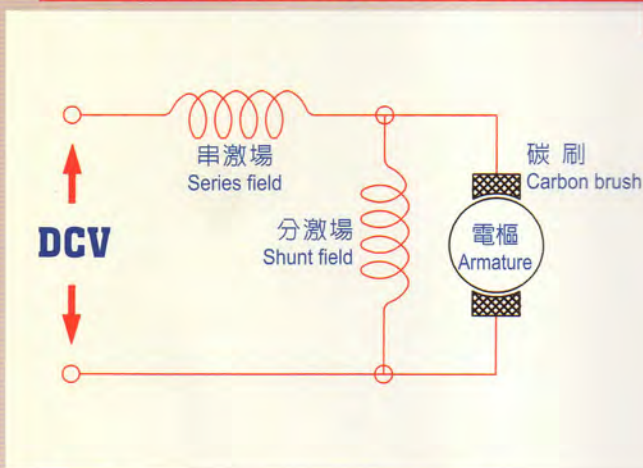
Become familiar with the characteristics of DC brush motors before attempting to operate the automatic feeder.

交流電變直流有刷式馬達有下列三種 Three different AC to DC brush-type motors are available:



Compound DC Motor combines the best of continuous stirring and intermittent string.

### ▶ 複激式直流馬達 Compound DC motor



複激式有刷馬達適用於：

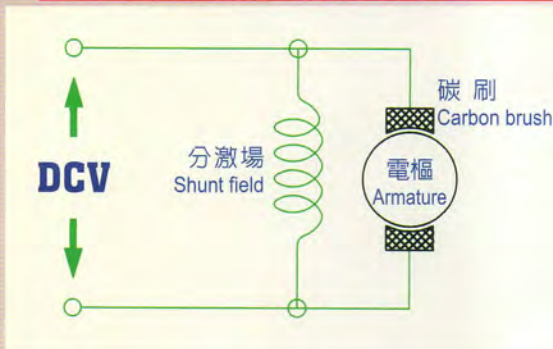
高精度機械，高低速變化大及扭力需極穩之機床。如銑床等切削類機床，機床進行自動切削時，速度不會下降，不會抖動，刀具不會損壞，加工後工件表面平順。

其結構是串、分激組合，負載時有瞬間互補功能  
(如鐵路電器化火車即用此複激式直流馬達)

**Compound DC motors may be used with:**

High-precision machine which require combine the best of sudden start and steady output torque at various speed. When routers and lathes are making cuts the cutting tool must not slow down and reaction must be minimized to avoid damage to the tool or the machine and leave work pieces with smooth surfaces. These machines may use a mix of series and separate-type motors which can be used to supplement each other at each time.  
(as in electric locomotives which use this type of compound motor).

### ▶ 分激式直流馬達 Shunt DC motor



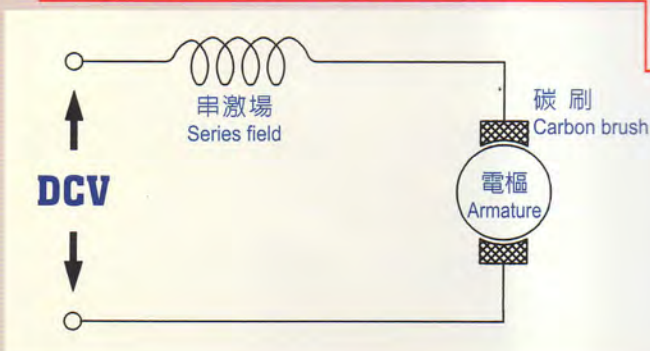
分激式有刷馬達適用於：

充電式馬達。其力道穩，但無瞬間扭力，較適用於電動自行車、老人代步車、電動輪椅等各種充電式車輛。

**Shunt DC motors may be used for:**

Machines with rechargeable batteries; these require a steady output torque, but lack of burst output torque. These may be used in perambulators, electric chairs and other vehicles using rechargeable power supplies.

### ▶ 串激式直流馬達 Series DC motor



串激式有刷馬達適用於：

轉速變化要求不大，只要求瞬間扭力，較適用於：  
如手電鑽、手提砂輪機、木工機類及各種DIY電動工具產品等。

**Series DC motors may be used with:**

System require for sudden start to reach content speed, not good for various speed application. These include hand drills, portable sanders, woodworking tools and other DIY tools.

## 銑床進給器附件

Power table feeder accessories for milling machine

X



Y



Z



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## 磨床進給器附件

Power table feed accessories for grinding machine



Z



Y

## 性能規格 SPECIFICATION:

機型 MODEL	型式 TYPE	電壓 VOLTAGE	電流 AMPERE	最大扭力 MAX Torque		轉速 R.P.M	重量 WEIGHT	包裝尺寸 LxWxH m/m
				cm·Kg	in·lb			
APF-500	X.Y	110V50/60Hz	2.8amp	155	135	0-210	6.0Kg	280x178x340
APF-750	X.Y.Z	110V50/60Hz	3.0amp	175	152	0-210	6.0Kg	280x178x340
APF-950	X.Y.Z	110V50/60Hz	3.4amp	195	170	0-180	6.0Kg	280x178x340
APF-280G	Y	110V50/60Hz	2.8amp	150	131	0-210	9.0Kg	280x178x340
APF-280G	Z	110V50/60Hz	2.8amp	150	131	0-210	8.5Kg	280x178x340

\* 以上附件數量及規格，本公司有權視實際需求變動之。(Specifications subject to change without prior notice.)

# 同益從研發開始一直到各項加工、組裝、品檢， 完全自有設備，不委外代工。

Whole stage of production, including products researched, parts processed, assembly and inspection are done by own facility, no request for any processing at outside.



▲ 性能測試  
Spec. Test



▲ 定子自動繞線  
Stator Coil Automatic Winding

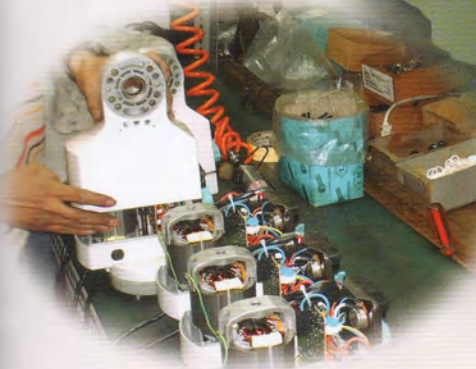


▲ 扭力測試  
Torque Test

▲ 研發  
R & D



▲ 線圈測試  
Coil Test



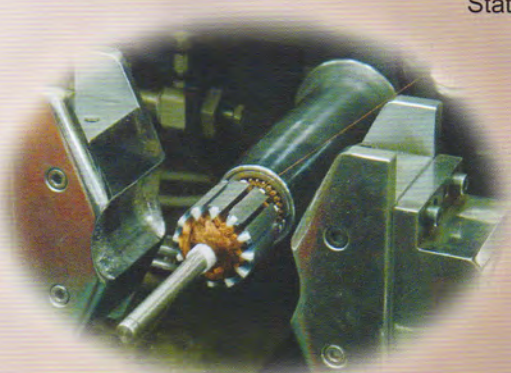
▲ 組裝  
Assembly



▲ 定子測試  
Stator Test



▲ 轉子動平衡測試  
Armature Balance Test

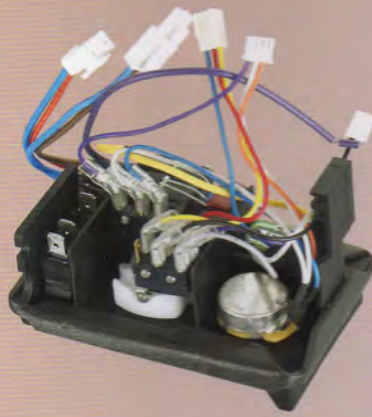


▲ 轉子自動繞線  
Armature Automatic Winding

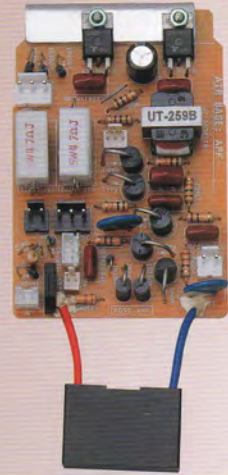
同益有的功能，它牌沒有，它牌有的功能，同益比它更好  
 TON-E offers features no other brand can match, and we match or exceed any features offered by other brands.



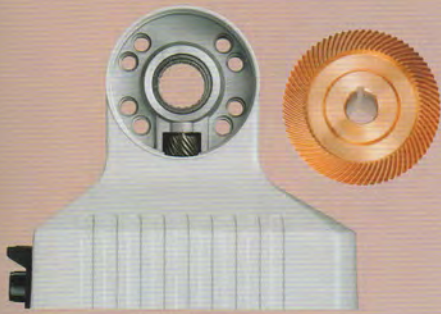
▲ 快速押送鈕設在左、右切換開關，符合人體工學操作方便迅速，具有寸動功能，能夠很方便使工件到達加工位置。  
 Rapid switches attached on both left/right shift handle, ergonomic design for easy operation, with jog function can let the workpiece approach the working position smoothly.



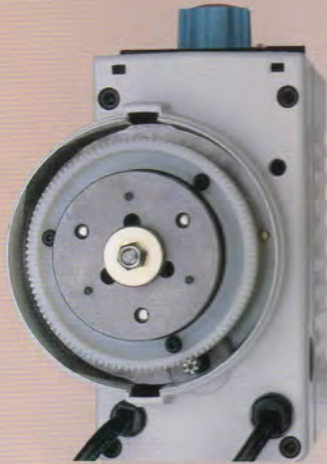
▲ 同益進給器結構，在每個環節連接處均採用不同形狀端子連接，維修拆卸容易。  
 Power Feeds parts was designed & linked by different sharp connector for easy maintenance and repair.



▲ 主機板層層保護，每個環節都有安全保護，電壓不穩時會自動調節，遇有外來因素故障，容易維修。  
 Main panel & all parts are protected strictly with safety issues, automatic correction function could be started while input power unstable, easy fix the problem caused by outside factors.



▲ 與螺桿傳動之齒輪採用螺旋傘齒輪效率高、噪音小。  
 Use Screw Bevel Gear for screw transmission, high accuracy and low noise.

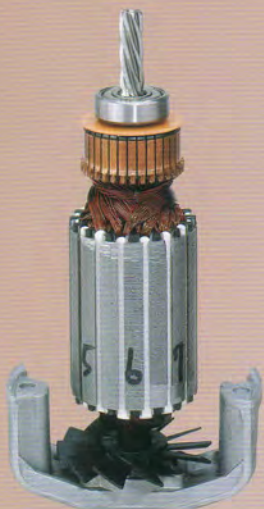


▲ 傳動塑膠齒輪與電機心軸齒比為無窮小數，兩齒輪運轉後不會重回原點，塑膠齒輪壽命較長，越用齒輪聲音越小。塑膠齒輪107T，電機心軸齒6T。  $107 \div 6 = 17.8333...$   
 The ratio between transmission plastic gear and motor shaft gear is extremely small. Two gears will not return to zero point after rotation. The plastic gear is durable. The noise is less after usage.  
 \*Remarks: The plastic gear 107T, motor shaft gear 6T  $107 \div 6 = 17.8333...$



▲ 採用新型專利離合器，左右瞬間反向，傳動塑膠齒輪不會被電機心軸齒咬損，離合器吸、放0.4秒以內。同速原點重複定位精度為0.05m/m以內。  
 New patented clutch enable rapidly change directions without damage of plastic gear by motor shaft. The clutch operate in 0.4 sec. cycle and holds the repetition position accuracy within 0.05mm.

它牌採用傳統式離合器，慣性大，左右瞬間反向時，無法即時煞車，導致塑膠齒輪容易被電機心軸齒咬損。  
 Other brands feeds use traditional clutch which with large inertia and can't brake immediately while momentary change directions and plastic gear will be damaged by shaft easily.



▲ 耐高溫漆包銅線、去重式動平衡，特殊設計散熱葉，正反轉散熱良好，鋁合金軸承座，轉子不易升溫、不易變形運轉穩定，使用壽命長。  
 Use high grade enameled wires for motor, reduction balancing method, fans designed as a good radiator, aluminum bearing holder keep ball bearing running without heat up quickly and not easy to cause deformation for long operation.



▲ 複激式定子漆包銅線【串激0.6m/m45圈，分激0.13m/m 1,800圈】運轉時，串、分激有瞬間互補功能，機床運轉進行切削時不會降速，不會抖動，確保刀具安全不會損壞，工件加工後平順。  
 The most advantage of compound stator winding method(0.6mm of 45 turns by Series winding; 0.13mm of 1,800 turns for Shut winding) could keep the motor speed and avoid any vibration while machine cutting, it cause workpiece running smoothly and cutting tool will not be damaged.



▲ APF-950專用，超強力型，附平面齒離合器，不打滑，扭力更強，讓更大型機床或重切削機床使用；其它安全功能及精度與APF-500、APF-750相同。  
 Super strong strength clutch with face gear specially use for model APF-950, strong torque, no slip happened, designed for big machinery and heavy cutting process. Other function, safety issues and accuracy are same as model APF-500 & APF-750.

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