



**TRAVELING COLUMN  
CNC HORIZONTAL MACHINING CENTER**

**CNC動柱式 臥式綜合加工中心機**

**HMC-40 / 50**

**宗賢工業股份有限公司**  
**CHUNG HSIWH INDUSTRIAL CO., LTD.**

# TRAVELING COLUMN CNC HORIZONTAL MACHINING CENTER

CNC動柱式 臥式綜合加工中心機

## HMC-40/50

CHUNG HSIWH INDUSTRIAL,  
the company dedicated to constant  
breakthrough and innovation, is  
presenting a newly designed traveling  
column horizontal machining center .  
It is designed and built with high  
efficiency and a high accuracy in mind .

秉持不斷創新突破的宗賢，  
再度推出具有前瞻設計概念的  
動柱式、臥式綜合加工中心機。  
展現獨特高效率與精密加工特色。

The best choice in FMS and FTL  
Mass Production Line!

- Traveling column
- Automatic pallet change
- Rapid traverse rate up to 36 M/min
- Acceleration 0.5 G

Applicable Industries :

- Automotive and motorcycle  
Parts machining
- Aircraft parts machining

FMS與FTL大量生產線的最佳選擇!

- 動柱式構造
- 自動交換工作台
- 快速位移高達36米/分
- 加速度0.5G

適合精密產業加工

- 汽機車零件加工
- 航空器零件加工





# 完美的機體結構

## PERFECTLY DESIGNED MACHINE

Structure Traveling Column With Maximum Stability And Rigidity

動柱式結構 · 穩定 · 高剛性

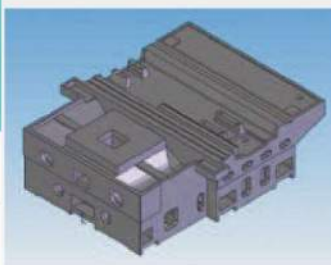


### Traveling Column

The cross travel of Column is equipped with roller type linear guide ways. Each linear way has upgraded stability of the column and machining accuracy.

### 動柱

動柱之前後行程採用滾柱式精密線軌，以提升立柱之穩定性，與加工精度。

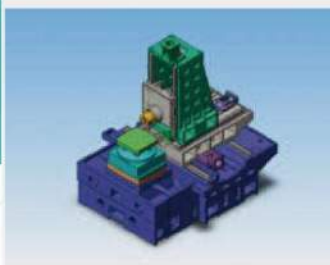


### Extra Wide, Stable Base

The box type base construction is one-piece manufactured from high quality Meehanite cast iron, tempered for stress relief. This combines with scientific rib reinforcement provide firm support for the machine without deformation.

### 超寬、穩重的底座

箱型結構底座，採用高級米漢納鑄鐵一體鑄造型。經回火處理以消除內應力。特殊肋骨強化設計，提供全機最穩固的支撐，長久無變形慮。



### Perfectly Designed Machine

All structural parts of the machine are manufactured from high quality Meehanite cast iron, stress relieved to ensure deformation-free year after year.

Three axes are equipped with heavy duty roller type linear ways combined with greater span between linear ways, assuring fast traverses and stable movement on 3 axes.

### 完美的機體結構

本機所有結構體完全採用高級米漢納 (Meehanite) 鑄鐵製成。經應力消除，保證多年使用機體不變形。三軸全採用重負荷滾柱式精密線軌，搭配超大跨距設計。保證三軸行程快速、穩定。

### WORK RANGE 加工範圍

#### HMC-40

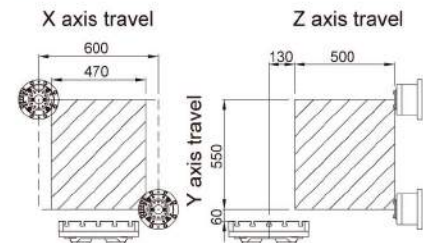


Table size : 400x400 mm

#### HMC-50

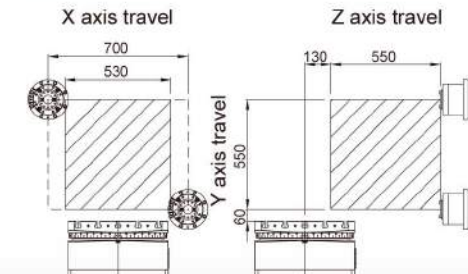


Table size : 500x500 mm

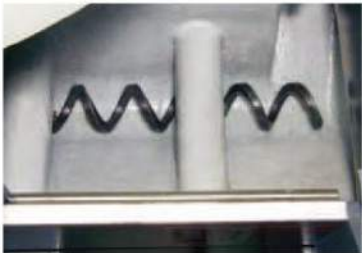


### ARM TYPE MAGAZINE / CHAIN MAGAZINE

- The 30 tools arm type magazine is standard equipment.
- 40/60 tools arm type magazine is optional.
- Bi-directional random tool selection.
- Fast tool change can be completed in 4-5 seconds. (tool to tool)
- The magazine is separately mounted in the cutting area with a protection door to protect against contamination from the chips or the coolant.

### 刀臂式刀庫 / 鏈條式刀庫

- 30把刀刀臂式刀庫為標準配備。
- 40/60把刀刀臂式刀庫為選購配備。
- 選刀方式雙向任意選刀。
- 快速換刀可於4-5秒完成。(刀對刀)
- 刀庫單獨安裝並具有保護門，防止刀具被沖洗液或碎屑弄髒。



### CHIP AUGER

With the base on both sides been installed the chip auger machine which conveys the chip to the crumb barrel where set up in the front of the machine keeping the machine's clean.

### 螺旋式排屑機

底座兩邊裝有螺旋式排屑機，可將切屑輸送至機器前面的集屑桶，保持機內之清潔。



### AUTOMATIC PALLET CHANGER (APC)

- Rotary type automatic pallet change features in stable construction and smooth change motion.
- Rotary table with hydraulic drive and stroke positioning used from rows of teeth to ensure precision positioning.
- The pallet in standard with 2.

### 交換工作台

- 迴轉式交換工作台，在於表現機台平順和穩定性。
- 工作台迴轉採用油壓驅動，並運用排齒行程定位，確保精密定位。
- 標準配備工作台為2個。



### BUILT-IN TYPE SPINDLE

- The built-in type spindle taper can be BT-30 or BT-40
- Choice of spindle speeds-12,000, 15,000 rpm(BT-40) and 24,000 rpm (BT-30).
- The spindle end has a labyrinth cooling design combined with air blast to prevent dust from entering into the spindle.

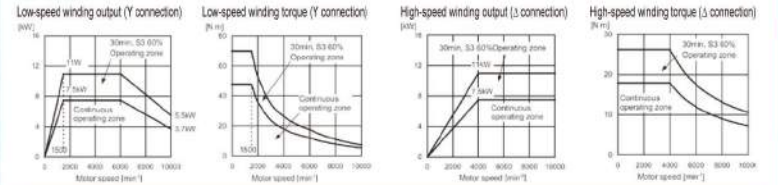
### 內藏式主軸

- 內藏式主軸規格BT-30/BT-40
- 可選擇主軸轉速12,000
- 15,000rpm(BT-40) 、24,000rpm(BT-30)
- 主軸端具有迷宮式冷卻設計，配合主軸吹氣，可避免碎屑侵入主軸。

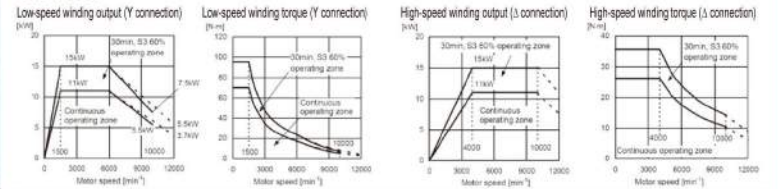


### THE MOTOR OUTPUT POWER FIGURE 馬達輸出功率圖

#### α8-10000i



#### α12-10000i



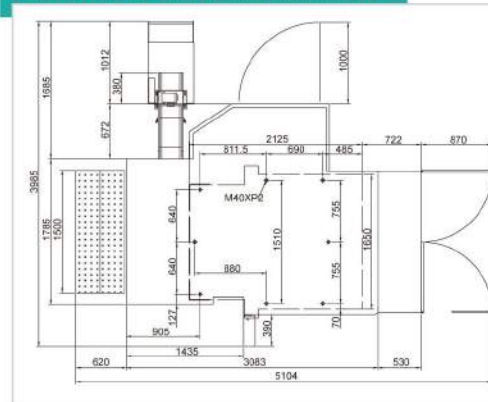
### CONTROLLERS

Famous brands of CNC controllers are available, Such as :  
 • Fanuc • Mitsubishi • Siemens • Heidenhain • Fagor

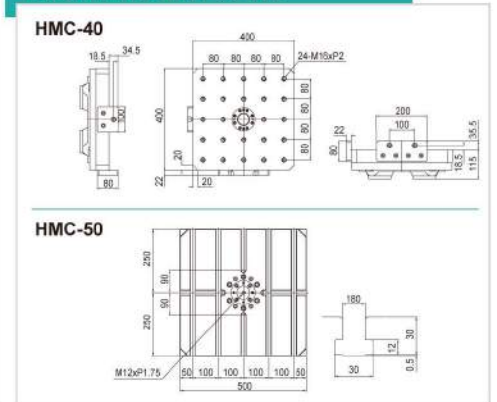
### 直立式操作箱

客戶可指定控制品牌，包括：  
 • 發那科 • 三菱 • 西門子 • 海德漢 • 發格

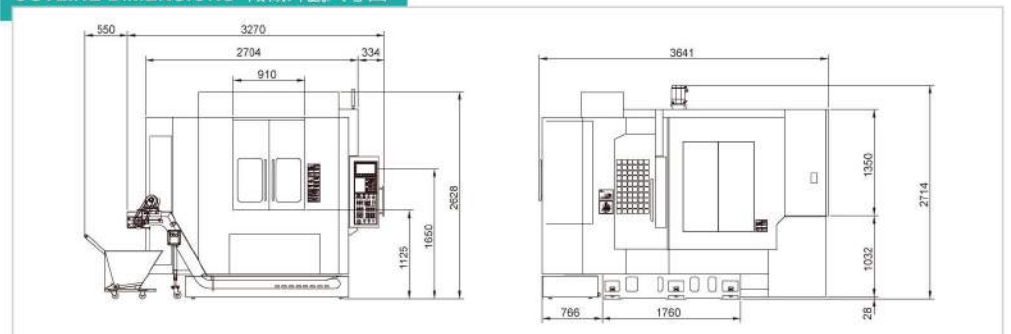
### POSITIONS OPERATOR 機械佔地面積



### DIMENSIONS 工作台尺寸圖



### OUTLINE DIMENSIONS 機械外觀尺寸圖





# SPECIFICATIONS 機械規格表

項目	ITME		HMC-40	HMC-50
STRUCTURAL MOVEMENT 機械移動方式	Structural movement	機械移動方式	Traveling column / 全動柱式	
	Slide way type	軌道方式	Roller Linear guideway / 滾柱線性滑軌	
TABLE 工作台	Table size	工作台面積尺寸	mm	400 x 400 / 500 x 500
	Work piece fastening	工件固定方式	M16 x P12 or T-slots	
	Table max. load	工作台最大負載	kg	400 / 500
	Table indexing unit	工作台最小分度	0.001°	
	Table numbers	工作台數量	2	
	Table change type	工作台交換方式	Rotary / 旋轉式	
	Pallet Exchange Time	交換台交換時間	sec	11
	Distance between table & floor	工作台面至地面距離	mm	1170
TRAVEL 行程	X / Y / Z - axis travel	X / Y / Z 軸行程	mm	600 / 550 / 500 / 600 / 550 / 500
	Distance from spindle nose to table center	主軸鼻端至工作台中心	mm	130 ~ 630 / 130 ~ 630
	Distance from spindle center to table surfer	主軸鼻端至工作台面距離	mm	60 ~ 610
	Distance from table surface to floor	工作台至地面距離	mm	1160
FEED 進給	X / Y / Z - axis ball screws	X / Y / Z 軸滾珠螺桿	mm	50 / 40 / 50 x P12 x C3
	X / Y / Z - axis rapid traverse	X / Y / Z 軸快速進給速度	m/min	36
	X / Y / Z - axis cutting feed rate	X / Y / Z 軸切削進給速度	m/min	10
SPINDLE 主軸	Spindle speeds	主軸轉速	rpm	10,000
	Spindle quill outer diameter	主軸套管外徑	mm	Ø150
	Spindle motor	主軸馬達(連續/30分鐘額定)	kw	7.5 (10HP) / 11 (14.7HP)
	Spindle taper	主軸錐度	BT40	
	Spindle driven	主軸傳動方式	皮帶式 / Belt	
ATC 刀庫	Magazine capacity	刀庫容量	30	
	ATC type	刀庫型式	刀臂式 / Arm type	
	Tool shank	刀把型式	BT-40	
	Max. tool diameter	最大刀具直徑	mm	75
	Max. tool diameter non adjacent	最大鄰空刀直徑	mm	150
	Max. tool length	最大刀具長度	mm	250
	Max. tool weight	最大刀具重量	kg	8
Tool Exchange Time (T-T)	刀具交換時間 (T-T)	sec	4~5	
MOTOR 馬達	X / Y / Z - axis motor	X / Y / Z 軸馬達	kw	4.4
	Coolant pump motor	切削液幫浦	kw	0.86
	Electric power	電源容量	kva	40
	Air pressurs required	空壓源	kg/cm <sup>2</sup>	6 ~ 8
ACCURACY 精度	Positioning	定位精度	mm	±0.004/300
	Repeatability	重複精度	mm	±0.003
MACHINE 機械尺寸	Machine dimensions(L X W X H)	機械外型尺寸	mm	4,000 X 5,000 X 2,800
	Packing dimensions(L X W X H)	裝箱尺寸	mm	
	Machine weight N.W / G.W	機械淨重 / 毛重	kg	10,000 / 10,500 / 10,000 / 11,000

All specifications, dimensions and design characteristics are subject to change without notice. 由於本公司不斷研究改進，本公司對此型錄之規格特性有變更之權利，恕不另行通知。

## STANDARD ACCESSORIES

- CNC control
- 3 Axes Roller Linear guideway
- Spindle speed 10000rpm
- Full splash guard
- Automatic pallet change (2 pallets)
- Arm type A.T.C. (30 tools)
- Pretensioned ball screws on 3 axis
- Spindle oil cooler
- Coolant jet around spindle
- Heat exchanger for electric cabinet
- Chain type chip conveyor & cart
- Chip auger , Screw type chip conveyor
- Coolant system
- Auto lubrication system
- Air system
- Spindle air blast
- Fluorescent working lamp
- Alarm lamp
- Leveling pads & bolts
- MPG hand wheel
- Auto power off
- Manual
- Chip flushing device on top of guard

## OPTIONAL ACCESSORIES

- Enlarge spindle motor
- Coolant through spindle 20bar
- 3-Axes optical scale
- Table with T-slots
- Oil mist collection device
- Air conditioning device for electric cabinet
- Arm type A.T.C. 40 Tools
- Chain type A.T.C. 60 Tools
- BT-40 Spindle 12000rpm / Belt
- BT-40 Spindle 15000rpm / Built-in
- Transformer
- CE
- Water gun
- Air gun

## 標準配備

- CNC控制器
- 三軸滾柱線性滑軌
- 主軸轉速10000rpm
- 全罩式護罩
- 自動交換工作台(2個拖板)
- 刀臂式30把刀
- 三軸螺桿預拉設計
- 主軸油冷卻機
- 主軸環狀出水
- 電器箱熱交換器
- 鏈條式排屑機集桶
- 螺旋式排屑機
- 切削液冷卻裝置
- 自動潤滑裝置
- 空壓系統
- 主軸吹氣裝置
- 工作燈(日光燈管)
- 警示燈
- 水平調整螺絲及墊塊
- 移動式手輪
- 自動斷電
- 操作，機械、程式手冊
- 護罩上方沖屑裝置

## 選擇配備

- 主軸馬達功率加大
- 主軸中心出水20bar
- 三軸光學尺
- T型槽工作台
- 油霧回收裝置
- 電器箱空調冷氣機
- 刀臂凸輪式刀庫 40把刀
- 鏈條式刀庫 60把刀
- BT-40皮帶式主軸12000 rpm
- BT-40內藏式主軸15000 rpm
- 變壓器
- CE
- 水槍
- 風槍



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