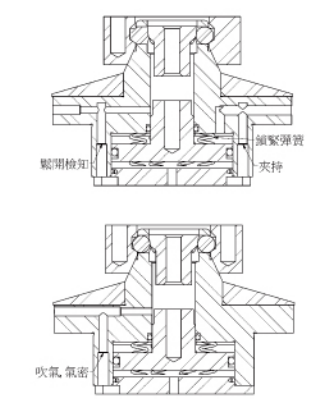


# QUALITY is the ACCUMULATION of DETAILS

## 品質決定於細節中

### Sophisticated B Axis Pallet Clamping Design / 精巧B軸工作台夾持設計



- The clamping force flows through steel balls, inner and outer taper rings only, without metallic fatigue or deformation problem caused by the clamping force applies on cast iron. 夾持應力只經過鋼珠、內錐環及外錐環三項零件，夾持力不經過鑄件，確保鑄件結構不因高夾持應力而疲勞或變形。
- The B axis pallet's clamping force is powered by heavy duty spring, which is different from the traditional hydraulic mechanism, which may cause accuracy deviation due to hydraulic power's fluctuation. 有別於傳統的油壓夾持設計，MRU系列B軸之工作台以強力彈簧夾持，不會有油壓系統因為壓力的變化而產生精度的誤差。
- Unique air curtain design that prevent the ingress of foreign object entering the clamping area. In addition, a pressure sensor is installed to double confirm the pallet is precisely in position. 獨特風刀機構，在夾持動作進行中防止異物入侵附著，並且以壓力開關偵知確保夾持真確。

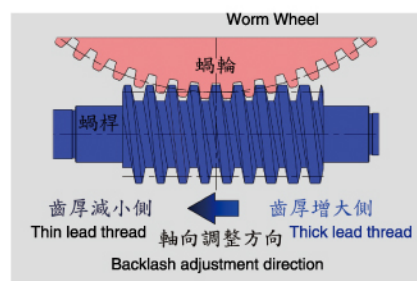
### Japan-made B axis Worm Wheel & Shaft with Variable Lead Thread B軸日製蝸桿蝸輪，獨特變齒厚設計



- The Japan-made dual – variable lead thread worm wheel and shaft. The worm wheel is made of high tensile copper features anti-wearing and high stability. 採用日本製雙導程(變導程)蝸輪蝸桿，日本獨特配方高張力黃銅，耐磨、穩定



- B-axis rotary table employs radial-axial bearing to support cutting force from both directions. 採用徑軸向軸承，能承受徑向及軸向重切削



### High reliability tool change / 超高可靠度換刀機構



- Tool exchanges directly between the tools in spindle cone and the magazine tool pot. No secondary tool pot or horizontal tool shifting needed. The servo-controlled system features simple structure, high efficiency and reliability. 刀倉直接扣換，無刀杯垂直水平動作，無副刀套橫移及橫移刀臂等複雜機構，伺服控制，換刀結構簡單，速度快，穩定度高。

SYNTAK ENTERPRISE, INC.

## MACHINE SPECIFICATIONS 機器規格

| MODEL 項目   |                                    | UNIT 單位 | MBH-3          | MODEL 項目                  |                            | UNIT 單位 | MBH-3                            |
|------------|------------------------------------|---------|----------------|---------------------------|----------------------------|---------|----------------------------------|
| Travel 行程  | X axis                             | mm      | 460            | Rotary Table<br>旋轉工作台     | Size 尺寸                    | mm      | 300x300                          |
|            | Y axis                             | mm      | 350            |                           | Work size 可容工件尺寸           | mm      | Ø455x410                         |
|            | Z axis                             | mm      | 350            |                           | Max load 最大荷重              | kg      | 120                              |
|            | Spindle nose to table<br>主軸鼻端至工作台面 | mm      | 100-450        |                           | Type 型式                    |         | Arm 刀臂式                          |
| Spindle 主軸 | Type 型式                            |         | BT-40,belt 皮帶式 | ATC & Magazine<br>換刀機構與刀庫 | Tool stations 容納刀數         |         | 30                               |
|            | Max. Speed 最高轉速                    | rpm     | 10,000         |                           | Max. Tool diameter<br>最大刀徑 | mm      | 75,L<110<br>35,L>=110            |
|            | Bearing I.D. 軸承內徑                  | mm      | 60             |                           | Max. Tool length<br>最大刀長   | mm      | 120 (adjacent pots empty)<br>320 |
|            | Center to Z cover<br>主軸中心線至Z軸護罩    | mm      | 630            |                           | Max. Tool weight<br>最大刀重   | kg      | 5                                |
|            | Motor 馬達                           | kw      | Fanuc 5.5/7.5  |                           |                            |         |                                  |
|            |                                    |         |                |                           |                            |         |                                  |
| Axes 三軸    | Rapid Feed X/Y/Z<br>快速移動速度         | m/min   | 48/48/48       | Controller 控制器            |                            |         | Mitsubishi M70A<br>Fanuc oIMD    |
|            | Cutting Feed X/Y/Z<br>切削速度         | m/min   | 12             | Dimensions<br>機器尺寸        | LxWxH 長x寬x高                | cm      | 220x220x242                      |
|            | Rails X/Y/Z 滑軌                     |         | Ball Rails 滾柱  | Weight 機器重                |                            | kg      | 3,300                            |
|            | Ballscrew X/Y/Z 螺桿                 |         | φ 32x16,C3     |                           |                            |         |                                  |
|            | Motor torque X/Y/Z<br>馬達扭力         | Nm      | 8/12/8         |                           |                            |         |                                  |
|            | Positioning accuracy<br>定位精度       | μm      | +/- 5          |                           |                            |         |                                  |
|            | Repeatability 重複性                  | μm      | +/- 4          |                           |                            |         |                                  |
|            |                                    |         |                |                           |                            |         |                                  |

Design and apifications are subject to change without prior notice. 設計如有變更，恕不另行通知。

## STANDARD ACCESSORIES 標準配備

- Full guarding 全密閉式钣金
- Telescopic way cover 滑道伸縮護
- Top cover 上蓋钣金
- Chip washdown 冲屑裝置
- Air ballast 主軸內孔清潔吹氣
- Automatic lubrication 自動潤滑裝置
- Heat exchanger for electrical cabinet 電氣箱熱交換器
- Work lamp 工作燈
- Alarm lamp 警示燈
- Coolant system 切削液系統
- Automatic power off 自動斷電
- Rs-232 interface RS-232介面
- MPG 手輪
- Rigid tapping 剛性攻牙

## OPTIONAL ACCESSORIES 可選配備

\* 工廠內安裝 Mounted in factory

- Chip auger 螺旋捲屑機
- Chip conveyor 鐵屑輸送機
- Coolant through spindle 20 bar\* 20 Bar主軸中心出油
- CE marking CE規格
- Transformer 變壓器
- Automatic Pallet Changer with two pallets 自動交換工作台 - 二個工作台



Chip auger 螺旋捲屑機



Chip conveyor 鐵屑輸送機



Coolant through spindle 20 bar  
20 Bar主軸中心出油



Automatic Pallet Changer  
with two pallets  
自動交換工作台 - 二個工作台

# SYNTAK

SYNTAK ENTERPRISE, INC.  
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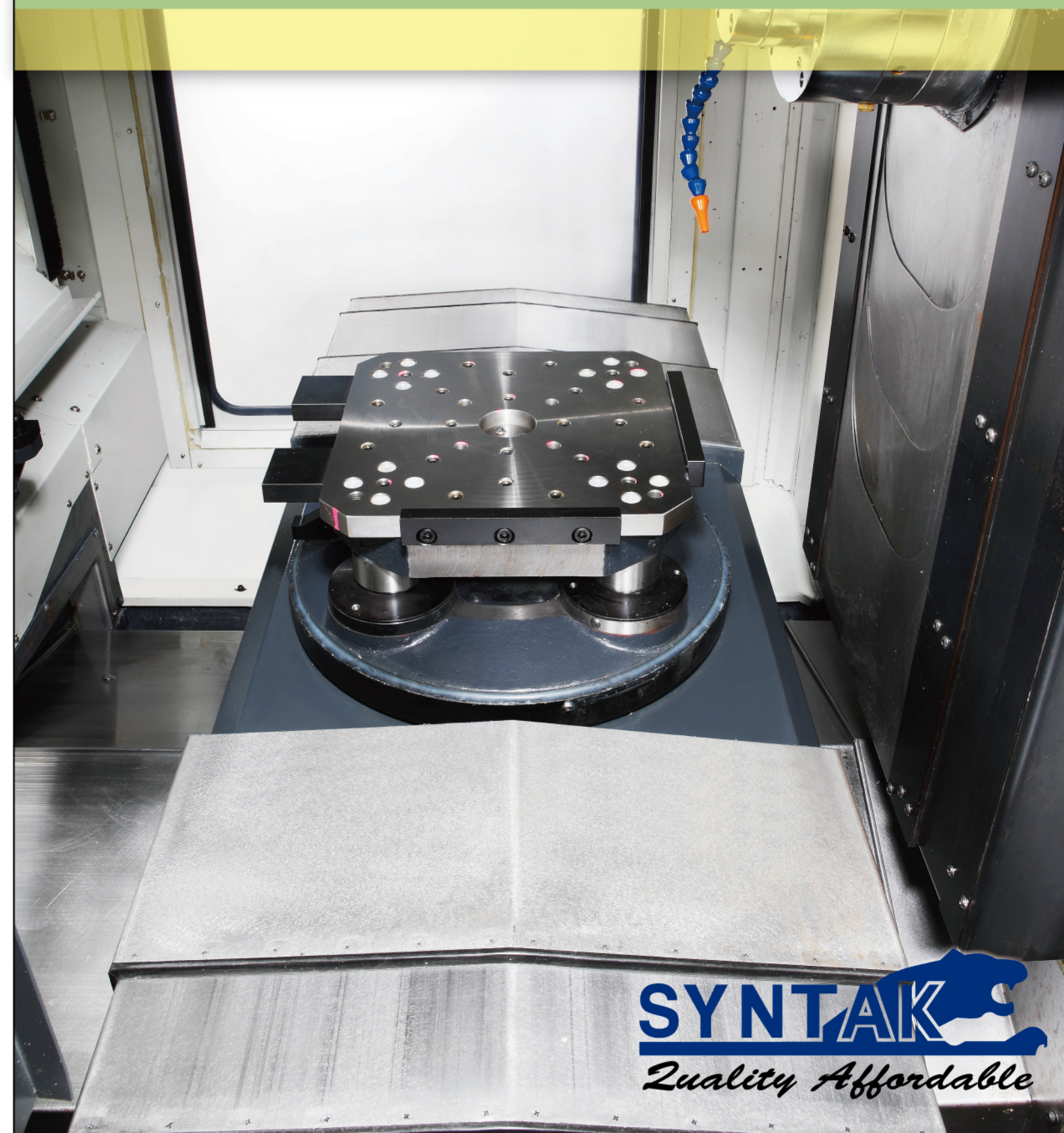
www.syntak.net

# HORIZONTAL MACHINING CENTER

# MBH

series

臥式綜合加工機 MBH 系列



# SYNTAK

Quality Affordable

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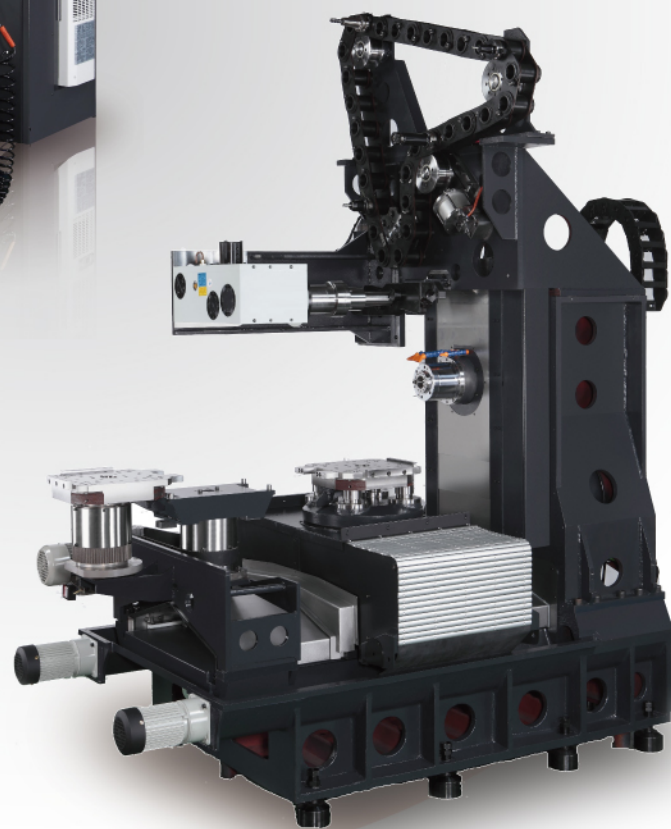
## COMPACT & MIGHTY 精巧而厚實

SYNTAK ENTERPRISE, INC.



Maximum Return of Investment - Four Distinguishing Features  
最高投資報酬率 — 四大特點

- Compact Footprint / 佔地面積小
- High Efficient Machining / 高效率加工
- Ergonomic Structure / 人機工學結構
- Environmentally Friendly / 綠能環保



## TECHNOLOGY & AESTHETIC 科技與美學

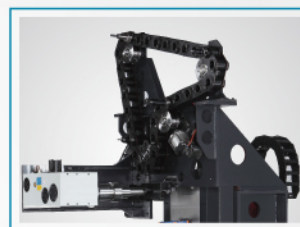
Unmatched Outstanding Performance  
無與倫比之頂級功能表現

- Ball Screws with Twin Nuts / 螺桿雙螺帽設計
- B Axis powered via variable lead worm shaft / B軸驅動採用變導程蝸桿
- High reliability tool change / 超高可靠度換刀機構
- Taper-coned pins for table locking device / 工作台定位錐鎖緊機構
- Cam-drive pallet change mechanism / 凸輪式工作台交換機構

## BEST VALUE for QUALITY PERFORMANCE

物超所值 精度非凡

Minimum Footprint with Maximum Productivity  
Space Saving up to 40% less than rival models  
最小的佔地空間 最大的加工產能  
相較於他廠同型機種 空間節省40%



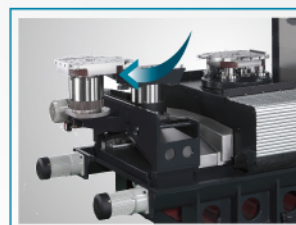
High Speed ATC  
高速自動換刀



Optimal Accessibility  
方便而安全之上下設計料



Grease Lubrication Instead of Oil –  
Better Anti-wearing Effect with Durability.  
油脂潤滑  
兼具抗壓性與長時間效用



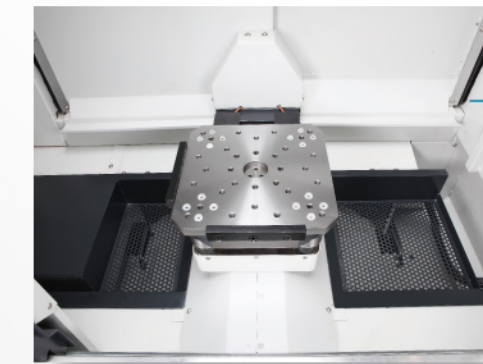
High Speed APC  
高速自動交換工作台



Swivel Control Panel  
可旋轉式操控面板

## ENGINEERED for HIGH EFFICIENCY MACHINING

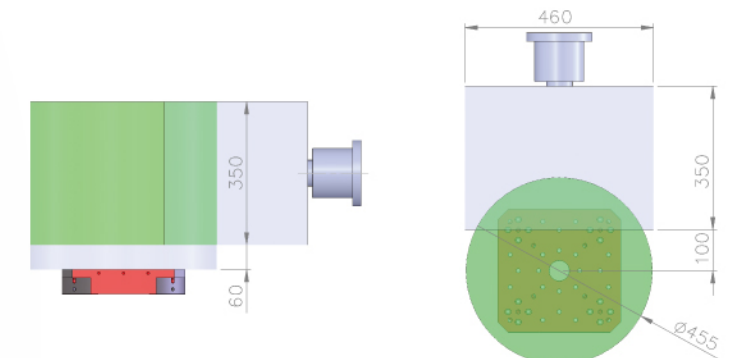
專為高效率生產力而設計



Large Cutting Area  
超大加工空間

Incorporate with B axis, the machine accommodates large cubical 4-face fixture for maximum machining capacity, the productivity is multiple of same-size vertical machining centers.  
允許安裝四面型立柱夾治具，搭配B軸旋轉，可多面加工，產能效率教同行程之立式加工中心機高出數倍以上。

### WORKING RANGE 工作範圍



### MACHINE DIMENSIONS 機器外觀尺寸圖

