



THERMOFORMING MACHINES

The **SPEEDMASTER** *plus* - Serie FC

vacuum and pressure forming + steel rule cutting + stacking



More than just fast: **Reliable**

設備特性

FC系列是一款瑞士WM公司全新的系列，新一代真空熱空成型機器確保高速自動化，全新的控制系統保證高效，高性能。適合較多原料。

穩定的成型質量，較短的換模時間，精確的裁剪。高效靈活簡易操作使用等是FC系列的優勢。。

綜合電力再生：依據運動的機構制動的期間的能量轉換成電量，使其輸入機器的電力系統中，實現能量節約。

FC系列具备较宽的应用范围，在现代工化中可以为多样化产品的需要提供合适的解决方案。



| MODEL | FC600 | FC780 | FC1000 |
|---------------------------------|---------------|---------|----------|
| Maximum mould size | mm 640x450 | 780x570 | 1060x700 |
| Maximum positive/negative depth | mm 130 | 130 | 130 |
| Forming clamping force | daN 15.000 | 30.000 | 60.000 |
| Total heating power | kW 50 | 96 | 176 |
| Cutting press clamping force | daN 50.000 | 60.000 | 90.000 |

FC-E:

真空擠壓成型，線上計量式裁剪，垂直疊所有的WM FC系列真空熱壓成型機器

FC-E-HP:

真空擠壓成型，垂直壓力沖孔，線上計量式裁剪，垂直堆疊

FC-E-IM:

在成型模具內真空擠壓成型並完成計量式裁剪，垂直堆疊

FC-E-IM:

在成型模具内真空挤压成型并完成计量式裁剪，追加在线剪切，垂直堆叠





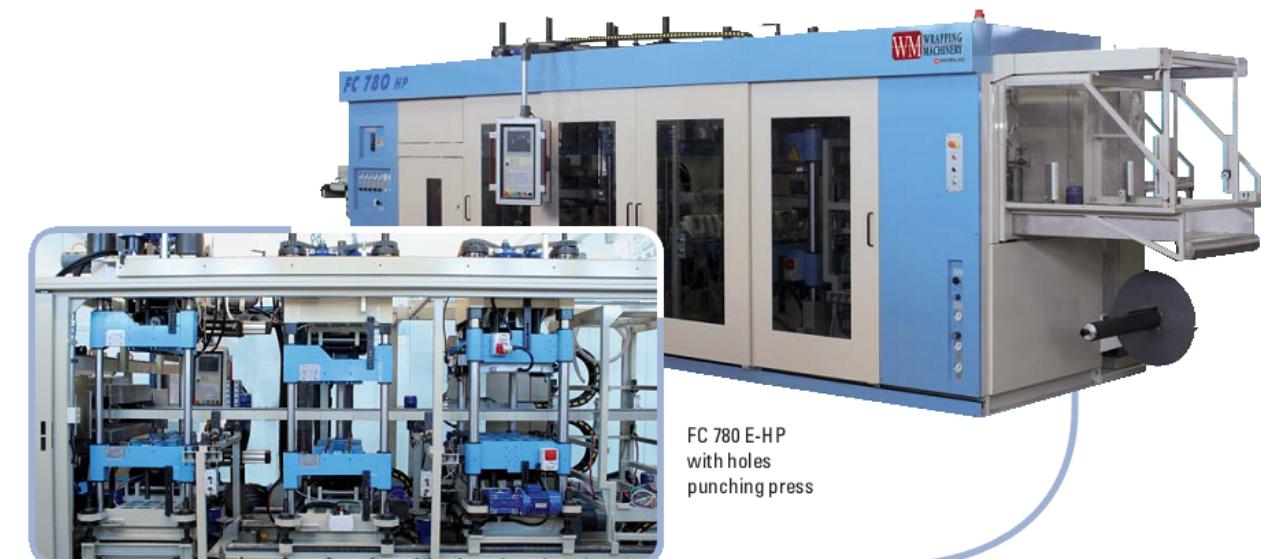
WM WRAPPING
MACHINERY
SWITZERLAND

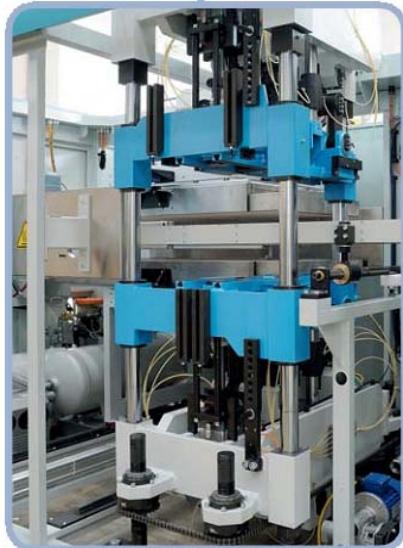
所有的WM FC系列真空熱壓成型機器，在最佳的成型條件下採用真空熱壓工藝可使用如下原料：PS , OPS , EPS , PP, PE, PVC , APET , PETG , PLA 及多層防潮材料。

優點：



1. 高效的產能
2. 簡易使用操作
3. 快速換模態，減少停機時間
4. 能源節約
5. 基礎的循環參數自我設置，使操作者簡易應用
6. 採用歐洲標準，使安全保護最大化，所有活動的模具有安全銷防止鬆動下落
7. 採用全新軟件程序，彩色監控器及觸摸面板，
8. 所有部件之間有足夠的空間便於清理及維護
9. 遠程服務協助，這是一個新的技術支持在全世界，有快速高效售後服務





片材加熱系統:

FC系列真空熱壓成型機器有上下兩層，均勻的加熱完成高質量的產品，移動是通氣壓系統。如果片材過熱，可以確保熱量直接撤離。加熱區的溫度可以調整（上下有縱長的加熱線圈），可以依據片料的特性選擇最佳的加熱，所有加熱部件是絕緣，以維持最少熱量傘發。更一步節約能量。可以依據工裝尺寸用適當的處理方法簡單定位，選擇最佳步距。

成型站:

成型站由可兩個上下可移動的壓台，壓台的移動由獨立的曲柄系統結合雙觸器操作伺服電機，壓台的動轉速度（開模或閉模階段）是可獨立調整。所有成型使用真空，壓縮空氣。氣壓系統框架，快速鎖模，伺服電機缺驅動。

壓力沖孔

壓力沖孔工藝有兩個壓台（模具），由三支拉桿帶動，壓台的上下高度，速度可通過獨立伺服電機和變頻器調整。縱向定位完全由編碼器電機驅動。

計量式裁切

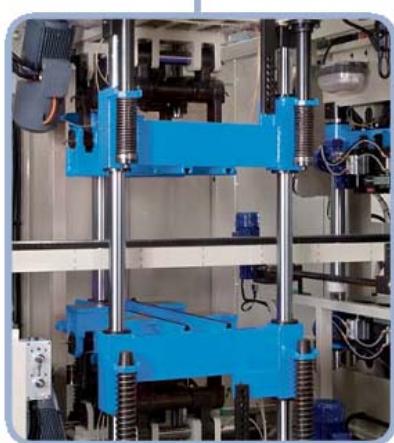
裁切有兩個獨立的移動壓台（模具）由四支拉桿帶動，給合伺服電機及變頻器控制，安裝了一個垂直電機調整上壓台，保證完美的控制裁切高度。活動的裝配位置自動注入潤滑液通過電泵。



Cutting press

堆疊，計數單元

標準垂直堆垛系統是由伺服電機驅動，堆疊的速度根據不同的生產速度可以選擇。堆疊的數量是可自我設置及調整，所有堆疊機構的定位由獨立的編碼器控制，3軸機器人系統可解決複雜產品的堆疊，可快速設置。



Holes punching



Upward



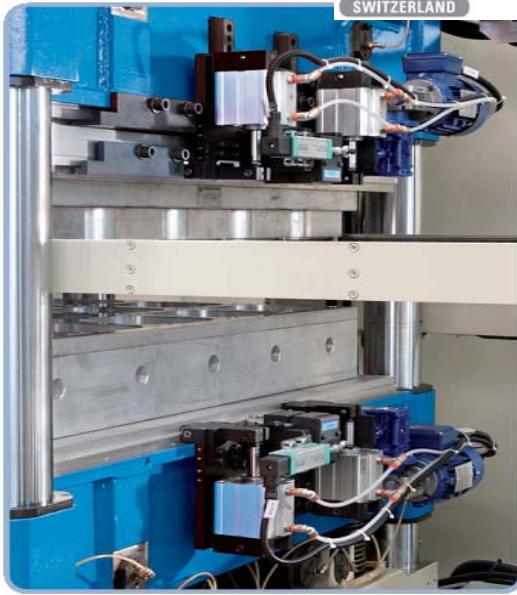
Downward



3 axis robot system



Servo-motor driven plug assembly.



Automatic locking and x-y axis electrical adjustment of the tool on both, upper and lower press platens.



控制命令系統:

此軟件系統通過B&R PLC工業測試，較好的依賴。具備彩色監控器及觸摸式控制健盤，滑動面板臂可移至操作者適合的區域。
強大USB記憶容量可記錄所有數據，可以連接以上網. 連接更多的電腦. 打印機. 也可以遠程連接售後技術支持系統



軟件：機器系統的心臟

所有真空熱壓成型採用全新軟件，對各工藝參數及功能具備完美的管理能力

專屬的自我設置功能界面及讀取界面，操作者可依據原料的類型，厚度，寬度，步距在界面上進行操作，從加熱至堆疊各項參數。這些參數可被可錄儲存，中文操作介面

The screenshot displays a Siemens WinCC Graphics HMI interface. At the top, it shows the machine name "WRAPPING MACHINED", the date and time "17.05.27 05/09/2012", the screen number "19.02", the title "Input / Output", and the page number "14". The interface is divided into several sections:

- WRAPPING MACHINED**: Shows a graphic of a roll of material and a monitor.
- Digital INPUT**: Shows a monitor icon and a configuration table for "Date" and "Time".
- Digital OUTPUT**: Shows a configuration table for "Display brightness" set to 100.
- Analog INPUT**: Shows a configuration table for "Encoder" and "Module ID".
- Analog OUTPUT**: Shows a configuration table for "Driver 1" through "Driver 4" and "Analog Out".
- Analog INPUT**: Shows a configuration table for "AI0" through "AI4".
- PWRLINK**: Shows a configuration table for "AIOP0/0/0/0" and "Axis controller init".
- PWRLINK**: Shows a configuration table for "AIOP0/0/0/0" and "Axis controller ready".
- PWRLINK**: Shows a configuration table for "AIOP0/0/0/0" and "Axis controller status".
- Input / Output**: Shows a large table for "In/Output" mapping with columns for "Name", "Type", "Value", and "Unit". It includes rows for "In 1" through "In 8", "Out 1" through "Out 8", "Digital", "Analogue", and "Robot".
- PWRLINK**: Shows a configuration table for "Rack 1" and "Module ID".
- PWRLINK**: Shows a configuration table for "Rack 2" and "Module ID".

At the bottom, there is a toolbar with various icons representing different functions and data types.

A screenshot of the WU Mining Academy software interface. The top bar displays 'WU MINING ACADEMY' and '0.06'. The main window shows a mining simulation with various mining units (shovels, haul trucks) and storage tanks. The interface includes tabs for 'Current Status', 'Detailed Status', and 'Daily Report'. A legend at the bottom identifies symbols for shovels, haul trucks, storage tanks, and other mining equipment.

| PRODUCTION DATA | | |
|-------------------------------------|----------|------|
| Model code: | 1 | |
| Total to be produced: | 1000 | |
| Production status: | Planning | |
| Cycle step with reached production: | 100 | |
| PRODUCTION CYCLES | | |
| Product: | Hours | Mins |
| Machine step: | 1 | 1 |
| Total: | 1 | 1 |
| Estimated remaining time: | 1 | 1 |
| Cycle time: | 300 | 00 |
| Cycles per minute: | 10 | |
| WORKLOAD CYCLES | | |
| Machine switched on: | Hours | Mins |
| Machine to automatic mode: | 1 | 1 |

The screenshot shows the 'Cycle data' screen of the Winning Racing software. At the top, it displays 'Winning RACING' and 'VERSUS 0.11'. Below that is a table titled 'Cycle data' with columns for 'NAME', 'WHEEL', 'TIME', and 'MILEAGE'. The table lists various racing cycles like 'Sprint', 'Endurance', 'Circuit', etc., each with a blue button icon. A large orange button labeled 'Start' is at the bottom right. The bottom part of the screen features a toolbar with icons for file operations, zoom, and other software functions.

The screenshot shows a software application titled "Winning Racers" with a version number "6.01". The main title bar includes "WINNING RACERS" and "Version 6.01". Below the title bar, there's a menu bar with "File", "Edit", "View", "Setup", "Race", "Help", and "About". The central part of the screen is titled "Press 2" and contains two sections: "SPOTS" and "LINES". Each section has a "Speed" and "Total" label with a dropdown menu. Under "SPOTS", there are four boxes labeled "3.0", "3.0", "3.0", and "3.0". Under "LINES", there are four boxes labeled "30.0", "30.0", "30.0", and "30.0". At the bottom of the screen, there's a toolbar with various icons for file operations like Open, Save, Print, and Exit, as well as other racing-related functions.

The screenshot shows a software interface for a robotic workcell. At the top left is the WM WRAPPING MACHINES logo. In the center is the title '7.11'. To the right is the word 'Robot'. On the far right are icons for '3D' and a magnifying glass. The main area has several sections: 'Data of the robot' (checkboxes for 'All mode_2', 'Deactivated', and 'Constrained to the stacking station'), 'Plates detach option' (checkbox), 'Bolt type' (checkbox), 'Manual speed' (checkbox), and 'Automatic speed' (checkbox). Below these are three tabs: 'Set 1' (selected), 'Set 2', and 'Set 3'. To the right is a table with columns 'x', 'y', 'z', '0.0 mm', '0.0 mm', '0.0 %', '0.0 %', '100.0 %', '2.0 %', '65.0 %', and '95.0 %'. On the far right is a vertical toolbar with various icons. At the bottom are toolbars for file operations (New, Open, Save, Print, etc.) and other functions.



WM Wrapping Machinery the right tool

■ EXPERIENCE ■ HIGH QUALITY ■ INNOVATION ■ RELIABILITY ■ CUSTOMERS CARE

勝東實業股份有限公司
台北市復興北路57號6樓
Tel :02-27722900
Fax:02-27726276
plas@shengtung.com.tw
www.shengtung.com.tw