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WITTMANN BATTENFELD at the Compamed in Düsseldorf

威猛巴頓菲爾在 ComPaMED 德國杜塞道夫國際醫療大展

Multi-component micro injection molding for medical technology

多組份微注塑成型用於醫療技術(異材結合技術運用)

At the Compamed in Düsseldorf, the international trade fair for the medical supplies industry and medical product development, held from 12 to 15 November 2018, WITTMANN BATTENFELD will demonstrate its medical technology expertise with the production of a sensor component in hall 08b, booth F03-1.

2018年11月12日至15日在德國杜塞道夫 ComPaMED 舉辦的醫療用品行業和醫療產品開發國際展覽會上，威猛巴頓菲爾將在 08b 展廳 F03-1 展位展示其醫療技術專長。

The injection molding machines from WITTMANN BATTENFELD, in this instance primarily the *MicroPower* developed for manufacturing micro parts, are already optimally suited for clean room production in their standard versions, since they are laid out for a minimal level of emissions. The all-electric *MicroPower* is designed as a self-contained cell enclosed on all sides, which simultaneously offers sufficient space for the integration of various optional pieces of equipment, such as a rotary table, robots, material dryers or temperature controllers. All drive modules of the all-electric drive system including all mechanical components are encapsulated in easy-to-clean housings.

威猛巴頓菲爾生產的微量注塑機主要是為製造微型零件而開發的注塑機，機器的結構設計是為了達到最低的粉塵排放，因此在其標準版本中已經非常適合於潔淨室生產應用。

全電動 *MicroPower* (全伺服馬達驅動)設計為四面封閉的空間，同時提供足夠的空間可安裝各種可選設備，如模具轉盤機構，機械手，材料乾燥器及模溫機，全電驅動系統的所有驅動模組（包括所有機械組件）都設計安裝在易於清潔及保養檢查的電控機櫃中。

At the Compamed in Düsseldorf, WITTMANN BATTENFELD will demonstrate its competence in the area of medical technology with the production of a sensor component for a medical measuring instrument in hall 08b, booth F03-1. It will be

manufactured on a 2-component machine from the *MicroPower* series specially designed for injection molding of micro parts, a *MicroPower 15/10H/10H*, with a 4-cavity mold supplied by Wittner, Austria. The razor-thin, spherical membrane injection-molded from PP and EVA9 serves to measure a specific pressure inside the measuring device. The parts will be processed in a clean-room environment (class 6 clean air according to the ISO 14644-1 standard) which is created by using a laminar flow box inside the machine. They will be removed by a W8VS4 SCARA robot from WITTMANN specially designed for this machine, inspected by a camera system integrated in the machine and then deposited on a conveyor belt.

在德國杜塞道夫 ComPaMED 國際醫療展上，威猛巴頓菲爾將展示其在醫療技術領域的能力，在 08b 展廳 F03-1 展位生產用於醫療測量儀器的傳感器組件。它將由 *MicroPower* 系列的雙組分機器製造，該系列專門設計用於微型零件的注塑成型，*MicroPower 15 / 10H / 10H*，由奧地利 Wittner 提供的 4 腔模具。由 PP 和 EVA9 注塑成型的薄球形薄膜用於測量儀器內部的特定壓力。零件將在潔淨室環境（符合 ISO 14644-1 標準的 6 級潔淨空氣）中進行生產，該環境是使用機器內部配置的潔淨室專用空氣過濾機器來確保符合生產需求及潔淨度。成型後的產品將由威猛集團專門為該機器設計的 W8VS4 SCARA 機器人來進行取出後的自動化需求，再由安裝在機器中的 CCD 品檢鏡頭系統進行檢查，然後放置在輸送帶上。

The *MicroPower COMBIMOULD*, equipped with two horizontal injection units and a rotary table, can be used for either single-component or two-component injection molding. This makes it possible to mold parts in different colors and/or made of different materials and/or produce two different parts simultaneously in one cycle, with two ejectors handling parallel ejection of the parts in the latter case. When using the machine for multi-component injection molding, the integrated rotary table takes care of transporting the part to the second injection unit and back.

MicroPower 組合配有兩個水平注射裝置和一個旋轉台，可用於單組份或雙組份注射成型。這可以用不同顏色的部件或由不同材料製成或者在一個循環中同時產生兩個不同部件產品模具生產，其中兩個頂出裝置在後一種情況下處理零件的平行頂出。當機器進行多組注塑使用時，模具轉盤負責將零件運輸到第二個注塑機並返回。



Fig. 1: *MicroPower 15/10H/10H COMBIMOULD* in clean room version
MicroPower 15 / 10H / 10H COMBIMOULD 在潔淨室中照片



Fig. 2: Membrane made of PP and EVA9
由 PP 和 EVA9 制成的膜

The WITTMANN Group

The WITTMANN Group is a worldwide leader in the production of injection molding machines, robots and peripheral equipment for the plastics processing industry, headquartered in Vienna/Austria and consisting of two main divisions: WITTMANN BATTENFELD and WITTMANN. They jointly operate the companies of the group with eight production plants in five countries, and its additional sales and service companies are active with 34 facilities on all important plastics markets around the world.

WITTMANN BATTENFELD pursues the further expansion of its market position as an injection molding machine manufacturer and specialist for state-of-the-art process technologies. As a supplier of comprehensive, modern machine technology in modular design, the company meets both present and future market demands for plastics injection molding equipment.

The WITTMANN product portfolio includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, temperature controllers and chillers. With this diversified range of peripheral units, WITTMANN offers plastics processors solutions to cover all production requirements, ranging from independent production cells to integrated plant-wide systems.

The syndication of the various segments under the umbrella of the WITTMANN Group has led to complete connectivity between the various product lines, for the benefit of plastics processors with an increasing demand for seamless integration of processing machinery with automation and peripherals.

威猛集團

威猛集團是塑料行業中製造射出機、機械手和周邊設備的全球領航者。威猛集團總部設在維也納/奧地利，由兩個主要部門，威猛巴頓和威猛組成，在全球 5 個國家設有 8 個生產工廠，其中超過 33 個直屬子公司位於世界各大塑料市場。威猛巴頓致力於製造最先進的射出機和工藝技術的獨立市場增長，提供現代化和全面的機械模塊化設計，滿足塑料射出成型的實際和未來要求。

威猛的產品系列包括機械手和自動化系統，中央供料系統，除濕乾燥機，稱重式和體積式的計量機，粉碎機，模具溫度控制器和冷卻器。憑藉這種全面的周邊設備，威猛可為塑料加工商提供涵蓋所有生產要求的解決方案，從自主工作單元到整個工廠範圍的系統。

威猛集團的結合已經使所有產品線連接為一體，提供塑料加工商在射出機、自動化和輔助設備的無縫接軌，成為尋求集成方面的所在優勢 - 所有這些都以漸進的速度發生。