

PRESS RELEASE

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Economical, flexible and sustainable**WITTMANN Group presents Airmould internal gas pressure technology at the Kuteno 2024**

For the WITTMANN Group, efficiency and sustainability are the overriding themes at the Kuteno 2024 to be held from May 14 to 16 in Rheda-Wiedenbrück, North Rhine-Westphalia/Germany. The main highlight on their booth No. C20 in Hall 5 is the Airmould internal gas pressure injection molding process. The Airmould units developed by WITTMANN are very easy to install on a wide range of different injection molding machine models and brands.

In Airmould internal gas pressure injection molding, nitrogen is injected into a mold cavity partly or completely filled with plastic melt, thus creating a hollow structure inside the molded part. In this way, the process saves raw material and the finished parts become lighter, while still showing a high-quality surface. For the nitrogen gas takes over the function of holding pressure and counteracts shrinkage of the parts from inside. Sink marks and warpage are thus eliminated even in thick-walled parts.

Typical applications for Airmould technology are oblong parts requiring light weight and high-cost efficiency. These include, for example, handles in motor cars, sports equipment or beverage crates. Airmould is also used for efficient production of media lines and small pipes.

WITTMANN's trade fair presentation in Rheda-Wiedenbrück demonstrates that small parts with hollow structures can be manufactured using Airmould as well. The items on display are clothes pegs made of polypropylene in an innovative design. Here, 26.3 per cent of material and weight have been saved by using Airmould, compared to compact injection molding.

It works with all brands of injection molding machines

In developing Airmould, special attention has been paid to easy operation, compact design and flexible use of the gas supply and gas injection units.

The Airmould system comes with a modular design and can be mounted with modest space requirements on a wide range of different injection molding machine models and brands. It consists of a central unit as connecting node for the individual system

components, the pressure control module to be installed close to the consumer, and a manual control unit. The central unit is equipped with an EUROMAP 62 interface. In combination with a WITTMANN injection molding machine, Airmould is operated via the machine's Unilog B8 or Unilog B8X control system and does not require a separate control unit.

WITTMANN possesses extensive application technology expertise in the field of internal gas pressure technology. WITTMANN stands ready to pass on this knowledge to its customers by way of extended service packages and consulting services – right up to initial simulations for Airmould-optimized part design.

In-house nitrogen generation – sustainable and inexpensive

For nitrogen supply, WITTMANN also offers a highly efficient solution from its own product development and manufacturing program. N₂easy makes it possible to extract the required nitrogen gas from the ambient air right next to the processing machine. The nitrogen and compression generation units are available in different sizes and with varying capacities, to supply either individual machines or to function as central systems.

Compared to conventional nitrogen supplies from gas bottles or liquid gas tanks, in-house nitrogen generation is substantially more cost-efficient and sustainable. With N₂easy, nitrogen generation requires only small amounts of energy, and the logistics expenditure is entirely dispensed with. A further advantage is that the compact, sound-insulated appliances are mobile and consequently flexible in use. N₂easy requires only a standard plug-in power socket.

In-house nitrogen generation with N₂easy already pays off for a daily consumption of no more than one gas bottle.

WITTMANN at the Kuteno 2024: hall 5, booth No. C20



Fig. 1: The Airmould gas supply and injection units come in modular design for use on a wide range of different injection molding machine models and brands.



Fig. 2: With Airmould internal gas pressure technology, the production of clothes pegs made of polypropylene requires 26.3 per cent less raw material compared to compact injection molding. The weight of the finished parts is reduced by the same percentage.



Fig. 3: N₂easy ensures more efficiency and sustainability in nitrogen supply.

Photos: WITTMANN

The WITTMANN Group

The WITTMANN Group is a globally leading manufacturer of injection molding machines, robots and auxiliary equipment for processing a great variety of plasticizable materials. The Group has its headquarters in Vienna, Austria and consists of two main divisions: WITTMANN BATTENFELD and WITTMANN. Following the principles of environmental protection, conservation of resources and circular economy, the WITTMANN Group engages in state-of-the-art process technology for maximum energy efficiency in injection molding, and in processing standard materials and materials with a high content of recyclates and renewable raw materials. The products of the WITTMANN Group are designed for horizontal and vertical integration into a Smart Factory and can be interlinked to form an intelligent production cell.

The companies of the Group jointly operate ten production plants in six countries, and the additional sales companies at their 36 different locations are present in all major industrial markets around the world.

WITTMANN BATTENFELD pursues continuous further strengthening of its market position as a manufacturer of injection molding machines and supplier of comprehensive modern machine technology in modular design. The product range of WITTMANN includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, temperature controllers and chillers. The combination of the individual areas under the umbrella of the WITTMANN Group enables perfect integration – to the advantage of injection molding processors with an increasing demand for seamless interlocking of processing machines, automation and auxiliaries.

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