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USER REPORT

[aquatherm GmbH, Germany](#)

Machine from WITTMANN BATTENFELD producing large molded parts at aquatherm

Since the end of 2018, the pipeline specialist aquatherm has been producing its large molded parts with diameters ranging from 90 to 250 mm fully automatically with a machine from WITTMANN BATTENFELD's MacroPower series. With 10,000 kN clamping force and a 9 kg maximum shot weight, the MacroPower 1000/16800 is the second largest injection molding machine installed at aquatherm.

aquatherm, founded by Gerhard Rosenberg in 1973 and based in Attendorn, North Rhine-Westphalia, is the globally leading manufacturer of plastic pipeline systems made of polypropylene for plant engineering and building services. The owner-managed company employs more than 600 associates at a total of seven facilities in Germany, Italy, the UK, the USA and Canada. Production takes place exclusively at the two German plants in Attendorn and Radeberg. 90% of the products are exported world-wide.

aquatherm produces some 41 million molded parts annually with pipe diameters ranging from 16 to 630 mm. The product range includes more than 17,000 different articles, which are used in single-family houses and apartment buildings, hotels, public buildings, industrial plants, healthcare and social services institutions, sports and leisure facilities and ships. Examples are pipelines for drinking water and sanitary installations, heating systems, distributor pipelines, under floor, wall and ceiling heaters and water recycling. The pipeline systems manufactured by aquatherm serve to transport water, compressed air, liquid foodstuffs and aggressive media such as acids, alkalis and varnishes, which often require extremely high resistance to chemicals. Apart from the high quality of its products, aquatherm is also concerned about environmentally friendly and energy-efficient production of its fittings and pipelines.

At its two facilities in Germany, aquatherm constantly works on optimizing its processes and increasing its capacities. In 2018, a new hall with 4,750 m² floor space for injection molding was opened, which was built according to latest standards of

energy efficiency and protection of the environment. The company's range of machinery was also extended by adding a large machine from WITTMANN BATTENFELD. This machine is a *MacroPower* 1000/16800 with 10,000 kN clamping force and a maximum shot weight of 9 kg, equipped with a W843 pro robot from WITTMANN and a customized automation system. This machine produces large molded parts with diameters ranging from 90 to 250 mm. The machine comes with the modern UNILOG B8 control system based on Windows® 10 IoT, which stands out by its easy operation. The electrically actuated safety gate on the operator side provides additional comfort. A 2000 mm opening stroke allows the insertion of large molds. Moreover, the machine delivered to aquatherm fully meets the high standards set by the company's management in terms of energy efficiency, cleanness and low noise level. The machine is equipped with a modern servo-hydraulic drive which offers high dynamism and runs very smoothly. Furthermore, the energy loss in the WITTMANN robot from the modern pro series has been significantly reduced by enlarging the energy storage unit integrated in the servo modules. Due to the robot series' optimized energy chain, the sound emissions were also considerably reduced.

Both the management team and the machine operators are fully satisfied with the new *MacroPower* after it has now been used in production for three months. Maik Rosenberg, one of aquatherm's three Managing Directors, comments: "In addition to its modest energy consumption and low noise level, the machine recommends itself by its high operating comfort. Its compact design and consequently small footprint is another great benefit of the *MacroPower*".



Fig. 1: The aquatherm plant located in Attendorn (photo: aquatherm)



Fig. 2: from the left: Managing Directors Christof, Maik and Dirk Rosenberg (photo: aquatherm)



Fig. 3: MacroPower 1000/16800 at aquatherm (photo: aquatherm)



Fig. 4: MacroPower 1000/16800 with customized automation (photo: aquatherm)



Fig. 5a+5b: Parts removal and depositing with WITTMANN W843 pro robot
(photos: aquatherm)



Fig. 6: Fitting with brass threading (photo: aquatherm)

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.

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