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USER REPORT

FT-TEC GmbH, Austria

FACEshield fasteners from FT-TEC manufactured with injection molding technology from WITTMANN BATTENFELD

FT-TEC, domiciled in Neutal, specializes in the development and production of high-tech solutions for the automotive industry, railway engineering and the security sector. As an answer to the current COVID 19 situation, FT-TEC has developed a high-grade protective face shield. Injection molding technology from WITTMANN BATTENFELD is used to make the fastening devices for the shields.

FT-TEC, a medium-sized company based in the Austrian province of Burgenland, was founded in 2005 by its present Managing Partner Friedrich Trobolowitsch. The company has been located at its present address in Neutal since 2012. On its production floor, 8 injection molding machines from WITTMANN BATTENFELD are used, ranging from 650 to 4,000 kN in clamping force and equipped with robots and auxiliary appliances from WITTMANN. According to Friedrich Trobolowitsch, WITTMANN BATTENFELD owes the exclusive use of WITTMANN BATTENFELD technology at FT-TEC not only to its excellent personal support and fast response, but also primarily to the availability of machines, robots and auxiliaries all from a single source thanks to the company being a member of the WITTMANN Group. "For me, it is important to have just one contact partner for machines, automation and auxiliaries, especially for international projects," says Friedrich Trobolowitsch. Another great advantage for Friedrich Trobolowitsch is the possibility to access the machines via WebService in the event of any problems.

FT-TEC basically specializes in three main business segments.

Firstly, it develops and manufactures high-tech products for the automotive industry and is one of about 200 companies worldwide which are certified according to the IATF 16949 automobile standard.

The company's second line of specialization is railway engineering products, such as components for concrete sleeper production, fastening systems and dowel anchors.

In this sector, FT-TEC holds the HPQ certificate (Manufacturer-related Product Qualification) from the German railway company Deutsche Bahn AG.

Thirdly, FT-TEC supplies emergency systems for the shipping industry and special fishery products. Worth mentioning in the fishery sector, for example, is an inductively rechargeable crab catcher which operates with light, sounds and vibration and partly replaces the bait fish which would otherwise have been used. For this product, FT-TEC won an innovation award in 2019. The emergency devices for the shipping industry are man-over-board (MOB) systems. The appliance developed by FT-TEC is the world's smallest MOB system licensed for professional navigation.

A new high-tech product FT-TEC is currently working on is an emergency device for 5G networks in the NB IoT (Narrowband Internet of Things) segment. The company's project partner is Deutsche Telekom AG, the customer is T-Mobile.

The COVID 19 crisis prompted FT-TEC to develop a protective face shield covering the eyes, nose and mouth. In this context, it was important for Friedrich Trobolowitsch to stick to his philosophy of creating a high-quality product which is not only fit for everyday use, but also meets the most stringent requirements for medical technology and is thus also suitable for use in hospitals and nursing care environments. Consideration of its environmental impact was not neglected either.

With the help of 3D printing, an appropriate design was created which differs from other models on the market primarily by the fact that the shields are less strongly bent and consequently offer more freedom of movement. Series production was started in mid-April.

To meet the high quality requirements, exclusively face shields made of PETG are used. This type of PET modified with glycol offers extremely high transparency, low viscosity and high impact resistance. The attributes of this material allow the exchangeable and recyclable face shields to be cleaned with disinfectants containing alcohol. The shields are cut to size from rolled sheet and given the required form by a laser cutter.

FT-TEC makes the fasteners for the shields by injection molding with equipment from WITTMANN BATTENFELD. The material used is POM, a resin ideally suited for the production of high-precision parts due to its excellent dimensional stability. Fasteners are currently produced from recycled POM in white, red, black and blue. The respective molds, a single-cavity mold used on a machine with 650 kN clamping force and a 4-cavity mold fitted onto a machine with 1,100 kN clamping force, have come from the Burgenland-based company HWB Horitschoner Werkzeugbau.

The face shields can be printed individually with an alcohol-resistant UV printing toner. The finished products are packaged at FT-TEC and can be purchased via the web shop <https://www.faceshield.at>.

In addition to the standard models, the company makes special models to fit children. The present daily production capacity stands at about 25,000 units.

As a next step, FT-TEC is planning to develop a new product for the medical sector. These models will be suitable for intensive care medicine, where protective goggles are required to be worn as well.



Fig. 1: from the left: Christoph Schweinberger, Sales WITTMANN Kunststoffgeräte, Roland Pechtl, Sales WITTMANN BATTENFELD and Friedrich Trobolowitsch, CEO FT-TEC, with fasteners made of recycled POM for the FACEshield (Photo: WITTMANN BATTENFELD)



Fig. 2: The FACEshield fasteners are produced in 4 colors. (Photo: WITTMANN BATTENFELD)



Fig. 3: Finished FACEshields (Photo: WITTMANN BATTENFELD)



Fig. 4: Friedrich Trobolowitsch, CEO of FT-TEC, with a finished product ready for shipment
(Photo: WITTMANN BATTENFELD)

The WITTMANN Group

The WITTMANN Group is a worldwide leader in the production of injection molding machines, robots and auxiliaries 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 auxiliaries, 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 auxiliaries.

Contact:**WITTMANN BATTENFELD GmbH**

Wiener Neustädter Strasse 81

2542 Kottlingbrunn, Austria

Tel.: +43 2252 404 – 1400

gabriele.hopf@wittmann-group.com

www.wittmann-group.com

FT-TEC Trading GmbH

Werner von Siemens-Strasse 5

7343 Neutal, Austria

Tel.: +43 2618 20 455 – 0

ceo@ft-tec.com

www.ft-tec.com