

March 2015, Kottlingbrunn/Austria

USER REPORT

RT-CAD Tiefenböck GmbH, Uttendorf, Austria

Technologically sophisticated plastic parts – all the way from the idea to series production from RT-CAD

The Austrian company RT-CAD based in Uttendorf, Upper Austria develops, designs and manufactures technically complex plastic parts. Since the beginning of last year, RT-CAD has been using a MacroPower 1500/8800 from WITTMANN BATTENFELD to produce large-sized parts.

Roland Tiefenböck established RT-CAD in 1997 as a company designing plastic parts. In 1999, the production of prototypes was added to its range of services with the acquisition of its first FDM machine for rapid prototyping. Only one year later, Roland Tiefenböck concluded a cooperation contract with Moldflow, so that he was able to offer his customers manufacturing simulation as well. Since then, RT-CAD has also been operating as a distribution partner for the Moldflow simulation software in Austria, and has been cooperating in this matter since 2011 with WESTCAM, which has taken over the distribution of Moldflow in Austria. The introduction of the rapid prototyping and simulation business was followed by a further extension of the service portfolio with vacuum injection molding in 2001, and the foundation of the company's own mold making shop in 2003 – a logical consequence for the professional mold maker Roland Tiefenböck.

In 2008, the company's first injection molding machine went into operation, only 2 years later, production began in a new manufacturing hall and then grew further over the years. Today, RT-CAD runs its production plant with 48 employees and 13 injection molding machines ranging from 50 to 1500 t in clamping force and operating in 3 shifts to make technically complex parts for well-known customers from the two-wheel industry, the electrical industry, welding technology and the furniture industry, with the two first-named sectors contributing about 80% of the company's sales. Among its products are parts for metal substitution, light-weight components, hybrid parts and parts in multi-component and IML technology.

In geographical terms, RT-CAD is mainly active in Austria, Germany and India, where it supplies parts to the country's second largest motorcycle manufacturer.

For the two-wheel sector, RT-CAD supplies above all cladding components and technical parts connected with the motor in the motorcycle segment of the Austrian manufacturer KTM, including mass production as well as products made of extremely hard-wearing materials for motor racing.

Roland Tiefenböck sees the key to success primarily in consistency from the initial product idea all the way through product development, engineering, manufacturing simulation, prototyping mold making to series production. Above all, the simulation with Moldflow software and the company's own engineering expertise create substantial added value for customers by avoiding errors in the preliminary stages.

Apart from the cladding parts and technical components for motorcycles already mentioned, a few examples of products developed and manufactured at RT-CAD are AC inverters for photovoltaic systems delivered to Fronius, "Macao" chairs for Wiesner Hager, for which the company actually won the reddot Design Award, display screens for the housing front panels of welding equipment or pushbuttons for cigarette vending machines, with the special feature of having the brand logos insert molded with a 2 mm layer of transparent plastic.

For his injection molding machines, Roland Tiefenböck requires above all easy maintenance, user-friendliness and a long service life, in addition to a favorable price/performance ratio. Good technical support is also important for him.

What he appreciates about the *MacroPower* 1500/8800 delivered last year – currently the largest injection molding machine operating at RT-CAD – is the good accessibility, easy lateral mold insertion, the machine's compact design and its outstanding user-friendliness via the modern B6^P control system. Roland Tiefenböck comments: "The menu overview of the control system follows a logical concept, and the control system can be integrated into the existing network without any problems. The graphic display provides a clear overview." Additional vital features for Tiefenböck are the machine's low noise level and its low energy consumption, due to the efficient servo drive. "Our power consumption hardly changed at all following the installation of the *MacroPower*", says Roland Tiefenböck. Another positive aspect from Roland Tiefenböck's point of view is the possibility to purchase everything from a single source at WITTMANN – from the machine to the automation system and the complete range of peripheral equipment.

The *MacroPower* installed at RT-CAD is a machine with 15,000 KN clamping force with special equipment for processing flame-retardant plastic materials and a WFC system fully integrated into the control system, which enables flow rates and temperatures of the individual cooling circuits to be displayed and monitored directly on the machine. This particular *MacroPower* is a complete production cell including

fully integrated temperature controllers, a W843 servo robot from WITTMANN and a protective enclosure.



Fig. 1: Bernd Aigner, WITTMANN BATTENFELD salesman, and Roland Tiefenböck, Managing Director of RT-CAD in front of the *MacroPower 1500/8800* with examples of parts produced on this machine, including the award-winning Macao chairs for Wiesner Hager



Fig. 2: Moldflow simulation (Photo: WESTCAM)

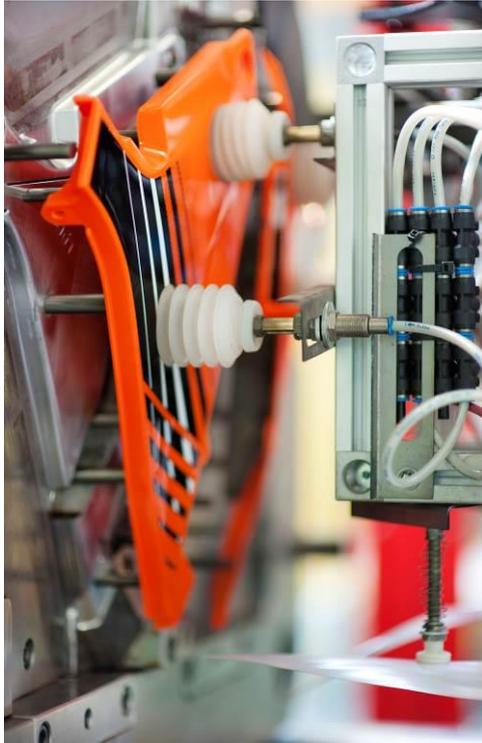


Fig. 3a + b: Cladding components for KTM motor cycles with IML technology (Photos: RT-CAD)



Fig. 4: The tail bracket for the KTM motorcycle is an example of substituting plastic for metal



Fig. 5: Side mirror for the KTM X-Bow – product development and mold making took place at RT-CAD (Photo: RT-CAD)



Fig. 6: Customers are to be prompted to purchase private brands of Austria Tabakwerke by attractively designed pushbuttons on the cigarette vending machines.

The WITTMANN Group

The WITTMANN Group is a worldwide leader in the manufacturing of injection molding machines, robots and peripheral equipment for the plastics industry. Headquartered in Vienna/Austria, the WITTMANN Group consists of two main divisions, WITTMANN BATTENFELD and WITTMANN, which operate 10 production facilities in 7 countries, including 30 direct subsidiary offices located in all major plastics markets around the world.

WITTMANN BATTENFELD focuses on the independent market growth in the manufacturing of state-of-the art injection molding machines and process technology, providing a modern and comprehensive range of machinery in a modular design that meets the actual and future requirements of the plastic injection molding market.

WITTMANN's product range includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, mold temperature controllers and chillers. With this comprehensive range of peripheral equipment, WITTMANN can provide plastics processors with solutions that cover all production requirements, ranging from autonomous work cells to integrated plant-wide systems.

The syndication of the WITTMANN Group has led to connectivity between all product lines, providing the advantage plastics processors have been looking for in terms of a seamless integration of injection molding machines, automation and auxiliary equipment – all occurring at a progressive rate.

Contact:

WITTMANN BATTENFELD GmbH

Wiener Neustädter Strasse 81

A-2542 Kottlingbrunn

Tel.: +43 2252 404 – 1400

Fax: +43 2252 404 – 991400

gabriele.hopf@wittmann-group.com

www.wittmann-group.com

RT-CAD Tiefenböck GmbH

Obermayerstrasse 2

A-5261 Uttendorf

Tel.: +43 7724 444 – 44

Fax: +43 7724 444 – 43

office@rt-cad.at

www.rt-cad.at