

SUPERIOR QUALITY AND CONTINUOUS DEVELOPMENT - powered by KNUTH



WORLD LEADING MANUFACTURER, TUBUS CARRIER SYSTEMS, USES KNUTH MACHINE TOOLS FOR ITS DESIGN AND PRODUCTION

The company was founded by Peter Ronge, and its brands Tubus and Racktime are the worldwide leading carrier systems for bicycles. While the production facilities are located in Asia, the prototypes and samples are developed at the company's headquarters in Muenster, Germany. The company utilizes 4 machining centers and additional precision machines by KNUTH Machine Tools, which make a crucial contribution in this respect.



X.mill 700 HS



X.mill 700 HS

Success through individuality

During his engineering studies Peter Ronge began building bicycles. Soon he focused on the production of bicycle carriers from high strength steel tubes (Tubus), later he added carriers made of high-strength aluminum (Racktime). Today, the company holds several patents in this field. Ronge explains the changing market: "In the past, you had one standard carrier, today individuality and product individualization is vital. We develop 250 new carrier models per year." In addition, the company produces suitable bicycle baskets, panniers, and mudguards. In order to be independent and develop their products quickly, the team uses versatile machines to produce its tools for samples and prototypes.

High level of commitment, superb service

In 2011 Ronge invested in a Hydro-Jet 2010 made by KNUTH, the first machine KNUTH produced in-house. "For private as well as business purchases I prefer to buy from local companies," explains Ronge his interest. It took a visit to KNUTH in Wasbek and the personal contact with the team to convince Ronge to purchase machines by KNUTH. "My first impression was: They never let you down. And that has been proven to be true," says Ronge. "KNUTH technicians went above and beyond to overcome the initial difficulties with the Hydro-Jet. I can always rely on the statements made by the company, whether it involves machine tolerances or delivery dates." Since then, Tubus Carrier Systems has added an X.Mill 700 HS with mineral-casting frame, a ZNC EDM 250 sinker electric discharge machine, a DEM 500 electric discharge machine and the water-jet cutting machine Hydro-Jet 2010 to its workshop in Muenster. In addition to the excellent price/performance ratio, Ronge emphasizes another benefit of this cooperation: "KNUTH offers comprehensive training sessions for users, tailored to the specific machines. As a result, we as users are more independent, and it gives us more flexibility. This allows us to develop settings for very complex tasks, that have not been done before."



DEM 500 A



Hydro-Jet 2010

Sinker electric discharge machine ZNC EDM 250 and electric discharge machine DEM 500

The various carrier lines by Tubus Carrier Systems feature excellent rigidity and fit, and the company provides exceptional system solutions. These include a variety of high-quality plastic components, such as mudguards, and specially developed mounting systems for panniers and baskets, which are manufactured in Muenster. The company utilizes a sinker electric discharge machine ZNC EDM 250 and an electric discharge machine DEM 500 by KNUTH for manufacturing and maintenance of the required tools. Both machines feature sophisticated and user-friendly controls for superior reliability and precision. If mechanical machining reaches its limits, the two electric discharge machines are utilized. This allows for burr-free and rough machining of the most difficult materials and complex forms. "When it comes to gap dimensions of 0.043 to 0.047 inches maximum precision is key, and machines by KNUTH deliver," says Ronge.





X.mill 700 HS



ZNC EDM 250

X.mill 700 HS with mineral-casting frame

The X.mill 700 HS features a mineral-casting frame, and is the ideal solution for die construction. Mineral-casting reduces vibration 6 times faster than cast-iron (GG25) and up to 10 times faster than steel, thus ensuring exceptionally quiet operation. “The X.mill is very robust and we use it constantly,” says Ronge. “Here we produce, among other things, prototypes made of aluminum, dies for simple injection molded parts, and complex, one-piece tools. Furthermore, we produce buckles for panniers, snap mechanisms for fastening systems, and electrodes for high-frequency welding for the manufacturer of the panniers.” The intuitive and state-of-the-art Siemens 828D control with simulation functionality facilitates the swift change between various production tasks. The spindle with its 15,000 rpm ensures maximal surface quality at smaller milling diameters, and the low spindle lead of the ball screw allows for exact dynamic feeds at short travels and load alterations.

Water-jet cutting system Hydro-Jet 2010

The company uses the Hydro-Jet on a daily basis. “We use the machine for cutting many different materials, including aluminum basket liners and precisely fitting rubber or wooden elements for our trade show exhibits,” says Ronge. With the Windows-based PC, CAD drawings and nesting can be easily and directly transferred to the machine. Ball screws and Panasonic drive ensure extremely fine cuts for precise tubular structures and grooves. The machine delivers an operating pressure of 55114 psi at an operating speed of more than 79 in/min. Additional advantage: Machining stainless steel sheets with the Hydro-Jet results in minor thermal discoloration, that require minimal rework.

