



Being a developer and manufacturer of technology does not only involve supplying equipment. It also means following up supply with service and assistance. Tiama shows how having customer support as priority is not just beneficial for clients, but can also be a decisive point when clients choose their machinery and equipment.



INSPECTION TECHNOLOGY



iama considers customer support as a main priority in its service strategy. This is why a real offer with a full range of services has been developed to be able to help customers with their daily stakes and challenges. The Toolings' activity is fully in line with this strategy.

Tiama counts more than 3800 carousel machines installed throughout the world. When providing machines, its goal is to build a long term partnership with glassmakers. Ensuring a full service linked to variable elements and bottle handling for these machines is one of the steps required to reach this goal.

Glassmakers always have to face regularly changing production campaigns and increasing articles' customization. One of Tiama's strong points is to be able to answer customer needs with customized toolings sets for all types of container productions including cylindrical articles, nonround articles, pharmaceutical, jars... The firm delivers genuine parts for article handling such as: neck and body starwheels, infeed screws, outfeed guides, blocking starwheel, plugs...

A GROWING BUSINESS ACTIVITY

From 2,400 starwheels sold in 2016 to more than 3,500 starwheels in 2018 all over the world adapted to very different customer needs, the Toolings activities are continuously increasingly. The first quarter of 2019 shows very good results for Tiama with around 1,500 starwheels already ordered.

The Tiama service department also supplies approximately 80,000 standard rollers and more than 9,000 specific rollers per year to respond to market demands. The company also supplies around 1,000 standard infeed screws and more than 250 specific ones fully adapted to



| SAME |

non-round article shapes, ensuring good introduction for starwheels.

All the provided elements are original Tiama parts that perfectly match the machines regardless of existing inspection features and their number. They provide better article handling efficiency and improved inspection performance thanks to precise settings and optimized machine safekeeping.

A STRATEGY ADAPTED TO DEMAND

As the number of toolings delivered by Tiama is growing every year, strategy had to be adjusted to guarantee a good organization.

Reactivity is the key point in this activity. Tiama is working with production sites in different countries all over the world to be Mounting drawings from Tiama's experts

closer to customers and improve reactivity and delivery time, while conception is still controlled. This allow them to be one of the fastest suppliers of toolings with huge technical experience.

REAL EXPERTISE

Tiama's added value and strength rely on its expertise in this domain. The toolings department is organized around dedicated customer follow-up, with experts working on personalized studies adapted to any glass plant and any type of carousel machine. Tiama Toolings team is always developing enhancements to respond to customers' needs, and works every day with them to offer new tools and major innovations. Tiama's goal is always to find and develop solutions for challenging projects



files. They also provide assembly layouts to give key information to customers in order to help adjusters and optimize job changeover time.

Tiama's teams are capable of providing a complete comprehensive view of a customer product-mix in accordance to its carousel machines. They offer full support of future projects with tooling set anticipation and new detections. Customers benefit from their expertise to optimize machine performance with the possibility to conduct trials at Tiama's premises or at customers' glassplant.

TIAMA EXPERTS' GUIDING PRINCIPLES

Reduction of job changeover time, ergonomy and removal of repetitive movements to improve and easier system to fix the axis on the starwheel, while remaining economically justified is one of the actions conducted by Tiama. In other words, they found a way to definitively fix an axis on a starwheel. The company's experts were inspired by a crimping principle to design an axis with a specific surface that will be inlayed into the plastic material of the starwheel during assembly. With the "PIT-STOP" roller solution (Quick changeover), washer axis and screws belong to the same single component that are permanently fixed onto the starwheel; no more risk of losing components and considerably reduced replacement time.

Many tightening processes were analysed and tested to propose an ergonomic solution integrating three main specifications to save as much time as possible for every job change: manage various thicknesses of starwheel/ fast change with only one tool/ efficiency of assembly.

With time, the small finishing parts of the starwheel can become defective and even break locally. Thanks to the "PIT-STOP" starwheel portion, operators no longer need to remove and replace the whole starwheel, with the risk of disturbing machine settings. Instead, only the defective part

