

A unique collaboration with ABB ensures the delivery of Tiki respiratory masks

Production is ten times faster - while quality has increased. With a new ABB robot, the company Tiki Safety is equipped to meet record demand for respiratory protection from healthcare.

There are busy days at Tiki Safety in Bro outside Stockholm. Demand for the company's respiratory protection has grown avalanche in both Sweden and globally. In order to meet the high demand, the production needed to be streamlined, and the solution became an ABB robot.

– ABB understood our situation as the pandemic struck. They used their expertise, and within a few weeks, the new robot was in place. All software was installed and tested with ABB's RobotStudio, a software for programming and robot simulation.

Thanks to the ABB robot, we now have a cycle time that is ten times as fast. This means that we can meet our orders and help hospitals in Sweden and around the world get products as quickly as possible," says Mikael Klockseth, CEO of Tiki Safety.

Tiki is one of the most advanced yet easy-to-use respirators on the market and consists of a unique overpressure mask with a small fan at the top. In order for Tiki Safety to increase the rate of production, the company 3Button Group together with ABB devised a tailor-made solution: a new production cell where an ABB robot, model IRB 2600, picks masks in and out of a machine that molds the sealing rubber mold that sits around the respirator.

The phase of manufacturing that was modernized previously took six minutes. Now it takes no more than 40 seconds. And it will be faster.

– In a few weeks, we hope to be down to 20 seconds per unit. In addition, no special expertise is required to work with the new line, and less manual work than before gives better quality of the product," says Mikael Klockseth.

Facts about the Tiki respiratory mask

Tiki has been developed in Sweden for use in demanding environments with stringent requirements on protection against airborne particles and bacteria. The respiratory mask is reusable, has a self-regulating fan, and is battery operated. The mask measures the strength of each breath in real-time and supplies the air and pressure the user needs. One significant advantage associated with this mask, which is unique to the Tiki design, is that it provides excellent visibility and good freedom of movement, as the filter and fan are located at the top of the mask rather than on a belt around the user's waist. Manufacturing takes place in Tiki Safety's factory in Bro, north of Stockholm.

TM3P classification

The Tiki respiratory mask has TM3P classification and comfortably exceeds WHO (World Health Organization) requirements on protection class FFP3 or higher. The respiratory mask must filter at least 99.95 percent of 0.3 µm particles to qualify for TM3P classification. The Tiki mask has been developed as a protection against coronavirus, although it also protects against other viruses, mold, bacteria, dust, smoke particles, asbestos, etc.

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