

Minicare BV

Analyzing Blood Precisely, Quickly, and Cost-Effectively



CASE STUDY — IN VITRO DIAGNOSTICS

Company Profile

Innovative in-vitro-diagnostics (IVD) company Minicare BV is active in the emerging field of point-of-care (POC) diagnostics. The Minicare POC platform enables physicians to get accurate blood readings right next to a patient's bedside from a single droplet of blood within minutes. The sensitivity and accuracy of this technology are on par with larger, more complex instruments found within central laboratories.

Business Situation

POC diagnostic tests must be simple for physicians, nurses, medical assistants, and other hospital personnel to perform; and the technology must run an extremely low risk of error. The Minicare POC test analyzer scans a barcode that links the test result to a patient's identity, a cartridge is inserted, a blood sample is added to the cartridge, and the results are presented and sent to the patient's file. To realize this simplified test flow, Minicare BV was searching for radio frequency identification transponders (or RFID tags) to add to the cartridges. These tags had to contain specific test, production lot, and expiry data and needed to be read automatically.

Technical Situation

Due to the size, shape, and functionality of the Minicare POC test cartridge, a precise hole had to be created in the RFID tags. The hole would enable contact between a blood separation filter directly above the tag and the start of a fluidic channel below the tag. Standard RFID transponders available on the market were incompatible with the limited space and exact geometry inside of the cartridge. Minicare BV needed a RFID tag solution to meet the incredibly specific requirements of its application.

Solution

Minicare BV chose Identiv to design and engineer a highly customized, affordable RFID tag that features a tailored antenna with optimized read/write performance and unprecedentedly small mechanical tolerances. High-precision die-cutting and special adhesives make the transponder both a data carrier and a key element in the mechanical structure of the cartridge.

PROJECT AT A GLANCE

End User	Minicare BV
Project Type	RFID transponders for medical devices
Location	Eindhoven, the Netherlands
Scope	Tag attached to every Minicare POC test cartridge
Identiv Solution	RFID Tags

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"Rising healthcare costs and staff shortages were driving the need to improve workflows and increase efficiency in the hospital setting. We needed to see a reduction in patient turnaround time. POC testing provides results at a patient's bedside during their first interaction with a physician, saving money and invaluable time. By connecting with Identiv, and selecting a highly customized tag from the company's comprehensive RFID portfolio, the precise functionality of the Minicare POC analyzer device was truly made possible."

- Anton van der Lugt, Senior Scientist Production Systems, Minicare BV



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Identiv's engineering team are experts in designing and manufacturing custom high-frequency (HF) and ultra high-frequency (UHF) transponders for embedded use in everyday objects, like books, toys, athletic apparel, perishable food items, pharmaceuticals, and medical devices. Identiv's portfolio of transponders is uniquely positioned to deliver RFID connectivity to any object in the Internet of Things (IoT) market.

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Benefits

Only Identiv's highly customized RFID solution was able to meet the challenging requirements of the Minicare POC diagnostics system and take the analyzer device from a visionary concept to reality. Additional tag optimizations are planned for the near future and will make cartridge production even more cost-effective.

With Identiv's transponder design, Minicare BV enables an easier workflow with more reliable test results, cuts laboratory costs, and provides better test outcomes for patients suspected of suffering from cardiac issues.

Identiv (NASDAQ: INVE) is a global provider of physical security and secure identification. Identiv's products, software, systems, and services address the markets for physical and logical access control and a wide range of RFID-enabled applications. Customers in the government, enterprise, consumer, education, healthcare, and transportation sectors rely on Identiv's access and identification solutions. Identiv's mission is to secure the connected physical world: from perimeter to desktop access, and from the world of physical things to the Internet of Everything.

Identiv has offices worldwide. Addresses and phone numbers are listed at identiv.com/contact. For more information, visit identiv.com or email sales@identiv.com.

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