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## Press release

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### **Hemics and DEMCON start HandScan development, the first non-invasive imaging system for monitoring inflammatory status of Rheumatoid Arthritis patients**

Today, **Hemics BV** and **DEMCON Advanced Mechatronics BV** announce that they have started developing the HandScan into a commercial product. This non-invasive imaging system was developed by Hemics for monitoring the inflammatory status of Rheumatoid Arthritis ("RA") patients. As part of the collaboration, DEMCON will be responsible for systems engineering, electronics, mechanics, optics and embedded software, while Hemics will remain in charge of the data algorithm, which translates the measurement results from the scanner into clinical information for rheumatologists. The two partners are facing the challenge of designing a lightweight, compact, easy-to-use and affordable device. Given that rheumatologists have to accept the device as part of their daily work, it is not only the illumination module that requires special attention, but the intuitive user interface and the industrial design as well.

Hemics is the first company in the world to develop a non-invasive optical imaging device that supports rheumatologists in their objective assessment of the inflammatory status of RA. Inflammatory status is a key parameter that rheumatologists have to consider in treatment decisions for RA patients. Reducing inflammation to a state of remission will improve the quality of life of RA patients and reduce long-term disability. The device works by measuring the blood flow in the 22 joints of the hand and wrist using diffuse optical transmission in a patented combination with blood flow modulation. Based on optical technology, the device poses no risk to patients and is fast, operator independent, inexpensive and easy to use.

Michiel van Beek, Hemics' Vice President of Technology, comments: "For the final development into a commercial product, we were looking for a technology partner with a broad range of competences and ample experience in medical technology. After a thorough selection procedure, DEMCON was the one that stood out. They have the required capabilities and presented a well-substantiated proposal. One crucial element was that DEMCON can take care of

development as well as production. From the outset, communication with DEMCON was excellent. We plan to present a prototype early this summer.”

Michiel Jannink, DEMCON’s Business Manager Medical Systems, is pleased with the collaboration: “Hemics is a great fit for the track record that we’ve built up in medical systems; their innovative technology is very appealing to our engineers. We have the competences in house to bring this technology to the market: from prototyping to series production and delivery. During prototype development, we can start building a supply chain when required.”

### **About Rheumatoid Arthritis**

Rheumatoid Arthritis (RA) is a chronic inflammatory disease, affecting between 0.5% and 1% of the population worldwide. RA is a progressive disease with currently no cure, making the disease a chronic condition. RA is associated with regular flare-ups and, if left untreated, these will cause irreversible joint damage and ultimately severe joint deformation and loss of function. The treatment of RA is staged. Initially, the patient receives conventional disease modifying anti-inflammatory drugs. If this treatment becomes ineffective, different and more advanced medication (e.g. biologicals, such as anti-TNF antibodies) is administered. The treatment is based on monitoring the disease activity, and if done effectively, irreversible joint damage can be prevented and any discomfort caused by the disease or side effects from the medication can be limited. As such, monitoring disease activity will help reduce the overall treatment costs, which is an important factor given the chronic nature of RA.

### **About Hemics BV**

Hemics is a medical device company active in the field of rheumatoid arthritis (RA). Hemics’ ambition is to improve the quality of life of RA patients by creating imaging devices that support rheumatologists in monitoring and treating this disease. Hemics’ systems are based on patented optical inflammation detection technology, a non-invasive, fast and automated method that supports rheumatologists in their objective assessment of inflammatory status, a key parameter when treating RA patients. Hemics was founded as a spin-off of Royal Philips Electronics, where the inflammation detection technology was invented.

### **About DEMCON Advanced Mechatronics BV**

DEMCON is a medium-sized, high-end technology supplier of products and systems, with focus areas including high-tech systems and medical devices. In early 2011, the company obtained the ISO 13485 certificate. This quality certificate for medical devices is in keeping with the company’s strategy to grow in the international medical technology market. The company headquarters are located in Enschede. The company also has sites in Eindhoven, Oldenzaal and Amsterdam.

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