Press Release - Preview Report

COMPAMED 2024: Enablers of progress in medical technology to exhibit

Many innovative developments at show—with accompanying programme of on-stage events on full range of supplier-related trending topics

In Düsseldorf in mid-November (11th to 14th), COMPAMED will once again be assuming its role as the world's leading trade fair for suppliers within the medical technology industry, showcasing the entire array of specialist knowledge, innovative product solutions and services supporting the production and development of medical technology manufacturing. The trade fair will be focussing on innovative materials, futuristic components, complex high-tech solutions based on microtechnology and nanotechnology and comprehensive services, including complete contract manufacturing. MEDICA, the leading international information and communication platform for the healthcare sector and medical supply industry, is scheduled to be held in parallel. Together, the more than 5,500 organisations attending both events (including around 750 at COMPAMED) will be exhibiting innovations spanning the entire medical supply chain from supplier components to finished end products for use in inpatient and outpatient care.

Two specialist forums with a programme of on-stage events across all four days of the trade fair have been an integral part of COMPAMED, which will once again be hosting professional visitors in Halls 8a and 8b of the Düsseldorf exhibition grounds. The COMPAMED HIGH-TECH FORUM (in Hall 8a) is organised by the IMicrotechnology Business Network IVAM in collaboration with Messe Düsseldorf and will focus on key technologies of progress in medical technology . The COMPAMED SUPPLIERS FORUM (in Hall 8b) has a broader focus on topics and issues trending within the supplier sector and is organised by trade magazine *Devicemed*.





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Mitgliedschaften der Messe Düsseldorf:

The global Ufi Association of the Exhibition Industry





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Innovative optical and photonics solutions for medical applications

A special highlight at the COMPAMED HIGH-TECH FORUM will be the session on laser and photonics applications, which is being hosted in partnership with EPIC (the European Photonics Industry Consortium). This session will focus on innovative optical and photonics solutions, which are increasingly also being used for treatment and early diagnosis, as they are minimally invasive and can consequently shorten hospital stays and recovery times. The main segments in this field are photonics devices and procedures involving microscopy, tomography and endoscopy, which allow a wide range of diseases to be diagnosed, treated and monitored. Endoscopy, optical coherence tomography (OCT) and photonics-based biomarkers are important tools for medical imaging to support diagnosis and early prevention of cancer, diabetes and Alzheimer's disease. In addition, laser surgery and phototherapy are now indispensable for the treatment of skin diseases as well as in ophthalmology and dentistry. Laserbased 3D printing is also being used to manufacture a wide range of medical implants. This brief list alone illustrates the importance of optics and photonics in contemporary medical practice.

Following on from last year's successful example, there will also be another hands-on session on microfluidics. Microfluidics is a field within microsystems technology centred on the use and channelling effects of small amounts of liquid (in the microlitre range). Microfluidics is particularly pertinent with regard to applications in medicine, life sciences, analytics and process engineering. It has found a high degree of success in commercial use—for instance, in labs-on-a-chip and μ TAS (micro total analysis systems). Significant advantages over conventional laboratory processes stem from the small amounts of analytical material required and the usually faster speed at which test results become available.

Close Euro-American collaboration

Another highlight will be the international exchange session titled Europe Meets USA—High-Tech for Medical Devices, which makes its third appearance on the forum agenda. This session specifically promotes





collaboration between component and device manufacturers as well as users from Europe and the United States. A particularly noteworthy aspect is the close link with the exhibitors taking part in the neighbouring MEDICA trade fair, which has enhanced professional networking right across the supply chain in recent years. The all-day session on 13 November will be rounded off with an international networking event. The event will focus on drivers of collaboration between component manufacturers, equipment manufacturers and practical applications from Europe and the United States, as well as the initiation of joint R&D projects and experience sharing regarding the challenges faced by the respective markets.

During the series of talks and conversations, innovative products and new technologies will be showcased and topical questions addressed: What are the challenges in modern medical technology? How can European and American companies work together to be globally competitive?

COMPAMED SUPPLIERS FORUM: daily sessions on trending topics

At the COMPAMED SUPPLIERS FORUM, a session on a current trending topic will be offered on each day of the trade fair, running in chronological order through manufacturing, regulatory affairs, sustainability and cybersecurity. Manufacturing in the medical technology industry is moving towards increasingly customised and personalised products. The new manufacturing processes required for this are connected, flexible and datasupported. Printed electronics and 3D printing are new processes that are driving progress in personalised medicine. At the same time, traditional processes such as injection moulding and machining remain important combinations of old and new often result in effective solutions. In all cases, the relevant standards and regulations must be followed. And in the regulation domain, the second day will be devoted to Regulatory Affairs. The European Medical Device Regulation (MDR) and the In-Vitro Diagnostics Regulation (IVDR) remain a factor for manufacturers, authorities and others involved in healthcare systems. Compliance with these standards ensures patient safety, protects against legal consequences and enables market access for medical-technical products. Only close collaboration with the competent authorities and continuous





monitoring can ensure that new products are successfully developed and rapidly brought to market.

Sustainability and cybersecurity

Sustainability has also been an issue of significance in the medical technology industry for a considerable time. This will be the topic of focus on the third day of the trade fair. It is an extremely complex subject, especially in the field of medical equipment, because medical products can be sustainable in starkly different ways. One example would be in their production by using less energy and consuming fewer resources. Another would be in their application by decreasing material usage, reducing their packaging or lengthening their service life. Recyclability and building a circular economy are also considerations of note. The fourth day of the forum will be dedicated to cybersecurity, which is becoming ever more important. Medical devices are increasingly connected and digital. This has a significant array of advantages but also increases possible risks with regard to patient safety and privacy. This makes safety precautions in the medical technology industry all the more important with a view to preventing unauthorised access to medical devices, patient data and critical infrastructure. Unfortunately, attacks of this nature have become increasingly common in recent times. As a result, eliminating vulnerabilities in software, inadequate authentication processes and insufficient encryption is crucial. Cybersecurity in the medical technology industry includes the implementation of security protocols, firewalls, encryption technologies and access control mechanisms.

IVAM joint booth: 38 parties from 7 different countries

In addition to the two specialist forums, the IVAM joint booth is part of the furniture at each COMPAMED. This year, the booth will bring together almost 38 exhibiting parties from the industrial and research sectors, representing seven nations—Germany, France, Switzerland, the Netherlands, Taiwan, the United States and China—as well as multinational project partnerships. Miniaturised components that empower smart, precise and reliable medical devices will be on display. Other items





being showcased include high-precision turned and milled parts, micropumps, miniature valves, sensors, ultrafine wires and tubes, and micro-optics. Visitors will also have the opportunity to view microelectronic and microfluidic systems. In addition, functional coatings, smart textiles and innovative manufacturing and processing methods will be exhibited, including state-of-the-art laser processes, 3D printing systems and diagnostic modules. Factors such as contract manufacturing and R&D services will also play a key role.

A COMPAMED classic: packaging for the medical sector

Another domain in the spotlight at COMPAMED will be packaging for medical devices, which places particularly high demands on those responsible for manufacturing the machinery. Again this year, MULTIVAC will be exhibiting innovative, sustainable packaging solutions for the medical devices industry. The centrepiece of its trade fair appearance will be a fully automated packaging line for the production of medical combination packs, which will include loading and unloading robots and use sustainable monofilm. The centrepiece of this line will be a thermoformed packaging machine enclosed in glass. An integrated SCARA robot will be responsible for automated precision-loading of the individual products into the pre-formed cavities. Before sealing with the base film, the top film is printed in-line in multicolour using a digital printer with UDI-compliant data. An optical inspection system then carries out visual inspection of the printed image. Thanks to comprehensive sensor technology and continuous process monitoring, the RX 4.0 thermoformed packaging machine offers high process accuracy and reproducibility. "We provide medical organisations with a diverse range of innovative inspection solutions for labelling and product control. Various components such as cameras, code readers or sensors are used depending on the task at hand. The result is a solution with components ideally suited for one another and a consistent operating concept," explains Thomas Große, sales project manager at **MULTIVAC Marking & Inspection.**





Innovative materials and coatings

New developments in materials and coatings are always among the evergreen topics explored and much sought after at COMPAMED. USbased Specialty Coating Systems (SCS) is one of the world's leading providers of services and solutions for conformal coatings, including parylene, liquid and ALD coatings, as well as multilayer coating technologies. Atomic layer deposition (ALD) is a process for depositing ultra-thin layers-all the way through to atomic mono-layers-on a base material. The conformal coatings from SCS create bio-compatible surfaces with high lubricity and offer excellent barrier properties against moisture, chemicals and dielectric effects for applications including medical equipment. Dexter Magnetic Technologies takes a different approach: The company is developing next-generation magnetic solutions. Permanent magnets of this type are currently used for cell separation, pacemakers, lasers, implantable valves and detectors. In addition, they form part of ventricular assist systems, pacemakers and a whole series of other medical solutions. The company's expertise in magnets' performance under extreme conditions and their compatibility helps customers achieve solutions that meet the strictest requirements for FDA or CE approval.

It is clear to see from these examples that COMPAMED 2024 is *the* international hotspot for the medical technology supply sector with a topclass programme of on-stage events and an abundance of new developments from exhibitors across the **five spheres**: Manufacturing & Devices, Services & Advice, Materials, Micro Tech, and IT in Tech.

Last year, COMPAMED and MEDICA recorded a total of 83,000 visiting professionals, who travelled in from more than 160 countries.

Information about COMPAMED 2024 online: <u>https://www.compamed-tradefair.com/</u>.

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