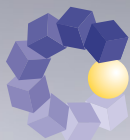


COMPAMED



Member of  MEDICAL Alliance
DÜSSELDORF, GERMANY
14-17 NOVEMBER 2022

PRISMA

The WILD Group
magazine

ISSUE 4 • 2022

PRISMA

TAKE A LOOK AT THE OPERATING THEATRES OF THE FUTURE

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▼ **PHOTONIC**

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WILD has put together a
new quality service package.

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A BROAD SPECTRUM OF SURGERY APPLICATIONS.



Manfred Gallé

Head of Business Unit Medical Technology WILD GmbH

The market for medical technology is a highly competitive one. Virtually no other market applies such high standards. Those who manufacture equipment or applications for operating theatres must have the necessary experience, guarantee utmost precision and be able to implement innovations quickly. The WILD Group fits that picture perfectly. Our current projects range from imaging techniques through microscopy, stand, lighting and navigation technology to endoscopy, robotics and tissue sample diagnostics. As a technology partner with in-depth knowledge in optics, mechatronics and lighting, we provide valuable input from development to manufacturing.

What's new in these two areas? We recently introduced a quality service package that guarantees our customers stable processes from the initial idea to serial production, plus a quick time to market. Moreover, with the latest additions to our plant equipment, we are entering a new dimension in precision manufacturing. We will be taking a closer look at these areas in this issue of PRISMA.

I am very much looking forward - and I also speak on behalf of my colleagues - to personally welcoming you to our stand at this year's COMPAMED/MEDICA in Düsseldorf. Let us work together on solutions for the operating theatres of the future.

I look forward to seeing you again!

Manfred Gallé



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A NEW DIMENSION IN PRECISION.

The WILD Group is adding a KERN Micro HD to its plant equipment and thus reaching a new level in precision manufacturing.

Be it optical assemblies, complex medical devices or precision parts for the semi-conductor industry: when manufacturing difficult workpiece geometries, WILD is confronted with processes that require utmost repeat accuracy and tolerances of just a few μm . From now on, the technology partner can meet such requirements even more reliably and at greater speed. WILD recently brought a KERN Micro HD on stream, a machine considered to be the benchmark in five-axis milling of small parts. "For us, this investment means an advance into a higher precision class. At the same time, the HD features an integrated pallet system and can be fully automated, making it an essential step toward even greater profitability and productivity", stresses production manager Christian Tazoll.

In combination with an enormous positioning accuracy and wear resistance it guarantees utmost precision even in a non-air-conditioned environment.

Christian Tazoll, Production Manager WILD

In future, using the KERN Micro HD's high-frequency spindle, WILD can process, among other things, hydraulic components for medical technology at a rotational speed of up to 42,000 r/min. In combination with the high rigidity of the machine bed and the elimination of reversal marks thanks to an optimised reversal behaviour, WILD expects the machine to deliver an unprecedented surface finish.

NEW STANDARDS IN PRECISION AND LONG-TERM STABILITY

The machine achieves this exceptional precision not least because of its temperature management: in practice, it

adjusts the temperature of the linear motors and integrates these in the hydrostatic system to minimise heat input. In addition, it precisely regulates the cooling fluid, sending it through all relevant components at a volume flow of up to 200 l/min. This results in temperature fluctuations of a mere $\pm 0.05 \text{ K}$. "In combination with an enormous positioning accuracy and wear resistance thanks to state-of-the-art micro-gap hydrostatics, it guarantees utmost precision even in a non-air-conditioned environment", Tazoll explains. "Under ideal conditions, the manufacturer guarantees a positioning

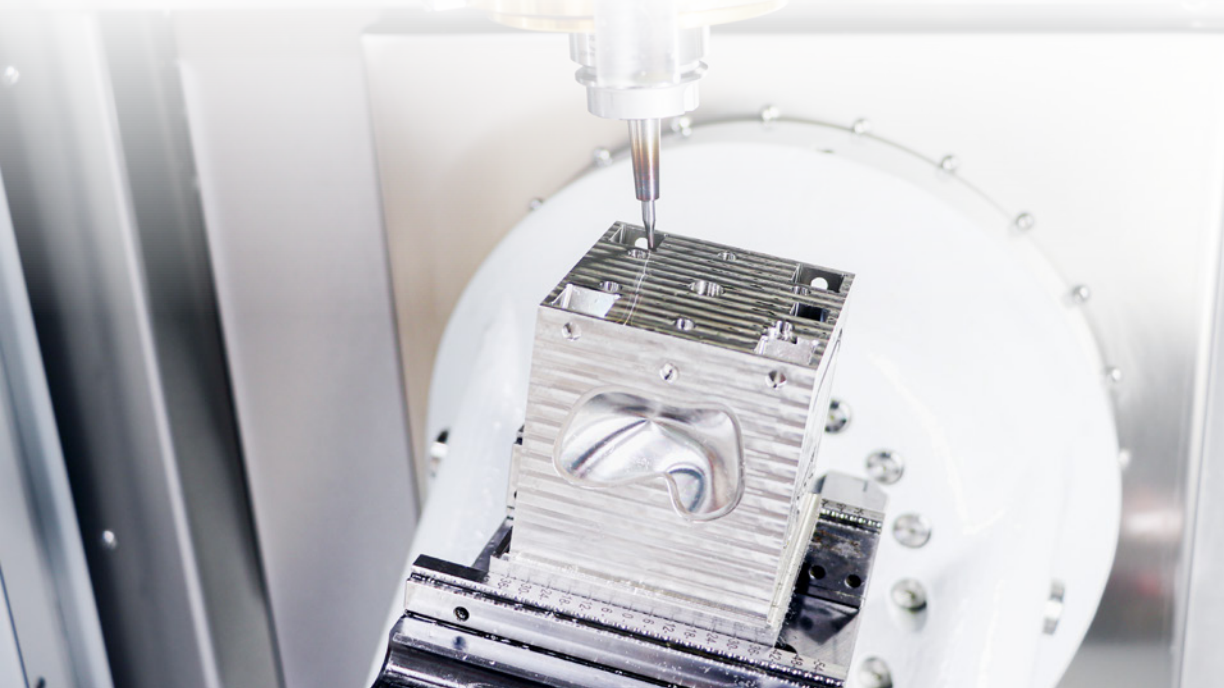
accuracy of $<1\mu\text{m}$, a position spreading width of $<0,5\mu\text{m}$ and a circular deviation of $<1\mu\text{m}$ ".

The second investment in the modernisation of WILD's machine park was a Hermle C22: a compact, quick machine that can cover approx. 90 percent of the parts range. "This translates into increased productivity. WILD has already had very good results with an identical machine, albeit with a smaller magazine", says Tazoll.

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SHAPING THE FUTURE OF SURGERY.

The WILD Group supplies various areas of multi-functional, high-tech operating theatres with a wide array of applications. Moreover, the Group is working together with customers on solutions for the surgery of tomorrow.

The operating theatre is one of the most sensitive areas in a hospital. Surgery is thus considered a supreme discipline among physicians and medical device manufacturers alike. Today's intelligent, multi-media operating theatres are full of high-tech equipment. These devices meet the most stringent quality requirements and incorporate technical innovations that make operations less taxing for surgeons and safer for patients. From hardware, such as floor stands for microscope swivel arms, to active disposables and lighting in the operating theatre: as a highly specialised all-rounder, the WILD Group supplies a plethora of devices and applications for operating theatres. Behind all this is an enormous development potential, a strong partner network, and expertise in electronics, optics, precision mechanics and software that almost no other company can cover at such a high level.

FUNDAMENTALLY STABLE

Let's start our journey through the operating theatre with an area considered essential for greater precision: optimal visibility of the area of intervention. This can be achieved through a combination of state-of-the-art microscopes and reliable floor stands, like the ones manufactured by WILD. WILD supplies a stand for one of the leading manufacturers on the market which allows for a long reach and thus greater freedom of movement at the operating table, high flexibility when positioning it inside the operating theatre and utmost stability against vibration.

INTELLIGENT SURGERY LIGHT

Photonic produces one of the light sources for this system. Their surgery competence, however, reaches far beyond that. Whenever light is required on the operating table, the WILD Group's lighting specialist delivers customised solutions in different wavelengths. For instance, Photonic adapts high-power LED modules for endoscopy, surgical microscopy and fluorescence imaging specifically to the customer's requirements so that they can be integrated into any existing lighting system.

Light quality, however, also plays a crucial role in the operating theatre itself. Performing concentrated visual examinations for hours on end is a mental and physical feat for physicians, during which they rely on optimal and, at the same time, flexible illumination. It makes a great difference whether the area of intervention is right under the physician's eyes or whether they have to navigate on screen during minimally invasive procedures. Too much light would cause disturbing reflections on the screen. In invasive surgery, however, a high colour rendering index and optimum illumination are required. Photonic managed to meet both these requirements in a single surgery light. "In ENDO mode, the light is reduced to a minimum to place the focus on the video signal of the endoscope camera, while keeping the surgical site visible for the assisting staff", Stefan Zotter explains.

ACTIVE MEDICAL DEVICES

The fact that medical interventions today are becoming ever quicker and more precise can also be attributed to the use of complex, powerful assist devices for computer-aided surgery. When products of this kind are used in direct contact with the patient, two key factors are decisive: They must be designed to operate correctly even after multiple sterilisation cycles, and it is also essential to choose the correct sterilisation method. The procedure becomes complex when active instruments are involved. WILD has proven a competent partner in these cases, with many years of experience in the development and manufacturing of active medical devices. "In many projects, we are already involved in the design phase, where we contribute our expertise to the selection of the right surfaces and materials and support our customers in making their products fit for cleanroom serial production", says Alfred Michalek, Head of Quality Management at WILD.

3D PRINTERS FOR STATE-OF-THE-ART MEDICINE

An innovative 3D printer manufactured and assembled completely by WILD for an Austrian customer is specifically tailored to the conditions of medical and dental applications. The device can manufacture top-quality components that possess outstanding biocompatible properties and allow for an almost unlimited range of geometries. This 3D printer combines industrial scalability and reliable compliance with medical specifications, for anything ranging from mandibular implants to perfectly tailored dental crowns. The great

advantage of this modular device lies in its speed: at 150 layers per hour, it allows for cost-efficient serial production of high-performance ceramics.

MEDICAL ROBOTICS: THE FUTURE IS HERE

Higher requirements such as time and innovation pressure, physical and cognitive stress, lack of staff or the constant influx of new technological developments make working in operating theatres an increasingly complex task for medical staff. Several modern operating theatres are already using medical robotics systems as a solution to this problem. These offer unbeatably stable hands, they sew more precisely than humans, minimise blood loss and give physicians an unprecedented view of the surgery process. "Robotics is one of the major future topics in surgery and WILD's experience and expertise in electronics, mechatronics, kinematics and software makes us an important partner for the development and implementation of innovative medical technology in the future", believes Manfred Gallé, Head of Business Unit Medical Technology at WILD.

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WHERE EXPERTS TALK TO EXPERTS.

Come and meet our technology and business developers at **COMPAMED/MEDICA 2022** and learn more about the contribution we make to equipping and developing the operating theatres of the future.

At this year's COMPAMED/ MEDICA, the WILD Group will be focusing exclusively on the topic of operating theatres. The technology partner develops and supplies a wide range of products for these multifunctional high-tech facilities. This is best illustrated at the booth of WILD and PHOTONIC (Hall 8a/ Booth J19), where the group will be presenting examples of applications and devices that are already successfully in use.

An expert lecture by Photonic Business Developer Stefan Preißer at the **COMPAMED Suppliers Forum (Hall 8b/Booth G40) on 15 November from 12.30 to 1.00 pm** will present the advantages customers can gain from the combination of development and manufacturing from a single source. He will be speaking on the topic of manufacturing-focused design of optical assemblies and devices. What is important for cost-efficiently manufacturable solutions? This much can be said already: You can only reliably reduce development risks and time to market by obtaining input and know-how from manufacturing at an early stage, and guaranteeing a direct integration of development, production and cleanroom assembly.

WILD Business Developer Daniel Pressl will be speaking at the **COMPAMED Suppliers Forum on 14 November from 11.00 to 11.30 am** about the importance of open innovation and cross engineering in coping with current and future challenges in the development and manufacturing of high-tech medical products. "As a technology partner of renowned medical technology manufacturers, we think about the future from the very beginning and develop products so that they can be manufactured easily, cost-effectively and at a high quality. By acting as a network hub, we capitalise on the fact that we can bring together the best minds in the industry and thus orchestrate innovation processes", Pressl explains.

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Hall 8a/Booth J19



quality

A REAL LEAP IN QUALITY.

Robust. Valid. Reproducible. The WILD Group's own quality service package guarantees stable processes from development to serial production.

Be it in medical products or laser assemblies - the quality level on the market is constantly rising. But how can you reconcile the desire for zero-defect quality with economic considerations that do not justify 100% verification of every detail during manufacturing? To manage these requirements, WILD has put together a sophisticated quality service package that guarantees a stable and more secure production.

"This helps us significantly reduce the risk of complaints in every step", stresses Head of Quality Management Emmerich Kriegl. "At the beginning, the coordination work is slightly more complex. But when we start looking into certain quality characteristics and deliberately examine a process as to its weaknesses, we very often identify improvement possibilities that ensure greater stability. As a matter of fact, we often help our customers achieve a genuine leap in quality."

The package is based on an in-depth **Failure Modes and Effects Analysis (FMEA)**. "This is essentially a mathematical model. When an area sounds the alarm, we introduce further measures for quality assurance", explains Kriegl. In the process, WILD can also devise a **quality assurance concept** that also includes efficient **assembly and control instructions**.

After the FMEA, a **process validation** will always follow when there is no possibility to fully verify a critical process output for the product's function as part of the company's added value.

"For this reason, we ensure an adequate specification, define clear process limits and deliver objective proof of the stability of the processes", Kriegl emphasises.

This process validation is carried out in three stages: The **installation qualification** ensures the proper implementation of the process environment. "Subsequently, we use **operation qualification** to explore the limits by carrying out various tests within and outside the specification limits. This allows us to precisely define the suitable process parameters," adds Kriegl. In **performance qualification**, the company ultimately furnishes statistical proof that the process works in a stable manner within the predetermined limits. "All in all, this package provides our customers with compliant processes, including the necessary documentation. Moreover, we speak the same language, which is based on objective documents and thus defines a common level," says Kriegl, who also draws on the knowledge of network partners for the implementation of these Q-measures.

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IT IS WORTH STOPPING BY!

Do you want to develop the medical device of tomorrow? Optimise an established system? Or are you looking for a reliable partner for the production of your devices?

We are ready for the development and implementation of your ideas. Take advantage of the inspiring environment of COMPAMED/MEDICA, to discuss your future projects with experts from WILD, PHOTONIC and our network partner INSION.

PRESENTATIONS BY OUR EXPERTS WILL TAKE PLACE AT THE COMPAMED SUPPLIERS FORUM (HALL 8B/BOOTH G40)

- ▽ Daniel Pressl, Business Development WILD
on 14 November from 11.00 to 11.30 am
"Open Innovation and Cross-Engineering to Tackle Current and Future Challenges of High-Tech Medical Device Development and Manufacturing."
- ▽ Stefan Preißer, Business Development Photonic
on 15 November from 12.30 to 1.00 pm
"Optical systems - from the requirement to the production-ready solution"

PUBLISHING INFORMATION

Owner and publisher: WILD Group, Wildstraße 4, 9100 Völkmarkt, Austria
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Photos: WILD, PHOTONIC, LITHOZ, Shutterstock, Messe Düsseldorf / ctilmann

THE WILD GROUP

The WILD Group is comprised of the WILD brands which are established in Völkmarkt and Wernberg (Austria) and Trnava (Slovakia), as well as Vienna-based Photonic. The technology partner develops and produces optomechatronic systems for medical and industrial applications as well as optical technologies exclusively on behalf of its customers. Approximately 500 staff members are always the first choice whenever precision and reliability are called for and wherever innovation takes place.