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The official showdaily of IMTEX 2019

Day 1 • Thursday, January 24, 2019

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# SHOW DAILY™

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Day 1 • Thursday, January 24, 2019

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## Striking Gold: IMTEX 2019 & Tooltech 2019

It's a momentous occasion for IMTEX, the flagship event for the Indian metal cutting industry, as it reaches its 50 years milestone. With a delightful spread of technological innovations from world over, the show opens its doors today to the manufacturing fraternity with a promise to be grander than ever.

Organized by Indian Machine Tool Manufacturers' Association (IMTMA), the twin show – IMTEX 2019 & Tooltech 2019 – is all set to dazzle the manufacturing industry with its wide array of offerings from far and wide in the field of metal cutting. The show that starts today will go on until January 30, 2019 at Bangalore International Exhibition Centre (BIEC) in Bangalore. Living up to its reputation, the show has garnered an overwhelming response from the industry. It hosts over 1,000 exhibitors from 23 countries and witnesses 7 country-group participation. It's a historic occasion for the Association as IMTEX completes its 50th year this edition. The show has been going strong year after year in its pursuit to showcase the best and the latest in technological advancements in the machine tool space. Recognized as the largest exhibition of metal cutting



Aerial shot of Bangalore International Exhibition Centre (BIEC) that is playing host to South East Asia's biggest Machine Tool Exhibition - IMTEX 2019 & Tooltech 2019. Source: IMTMA

machine tools and manufacturing solutions in South and South-East Asia, the biennial trade event is all geared to push itself to newer heights, showcasing the cutting-edge and expanding business opportunities for the participants.

**Bigger, Grander**

IMTEX 2019 is special with it crossing its 50 years milestone. Hence, many new features have been added to the show to make it all the

more grand. Sharing his views on the golden jubilee celebration of IMTEX, Jamshyd N Godrej, Chairman - Exhibitions, IMTMA, said that the response has been significantly impressive as could be gauged from the enthusiasm shown by the exhibitors and user industries. The exhibition is being held in six halls covering an exhibition space of 80,000 sq mt. BIEC has expanded its infrastructure by constructing one more hall

(Hall 5) in its premises. IMTEX is the first major exhibition to be held in this new hall.


**What to expect**

The much popular trade fair has exhibitors that represent every aspect of traditional manufacturing as well as modern ones. IMTEX 2019 has companies displaying turning, drilling, boring, grinding,

To be continued on 4 ➔

"The REVO scanning capability allows us to catch from errors much more quickly, without a time penalty on our inspections. It has definitely made us more proactive in catching quality problems early in the game."

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HALL - 6  
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“IMTMA took a lead in showcasing global developments when Indian manufacturing industry was in a nascent stage. We made a start 50 years ago and we are immensely proud of how the show has evolved in 5 decades and fostered an understanding among the manufacturing fraternity.”

**Jamshyd N Godrej**  
Chairman - Exhibitions  
IMTMA



“It is at IMTEX that latest technologies which are widely prevalent in overseas countries are launched and displayed live. The current edition of the trade fair showcases advanced technologies like 3D Printing, Industrial Internet of Things, Automation, Robotics, and Industry 4.0.”

**P Ramadas**  
President  
IMTMA



“It is incredibly inspiring to see how a brand impacts trade in a positive way and leaves its imprints in the timeline. The wheel which was set in motion 50 years ago with All India Machine Tool Exhibition, as it was known back then, was a significant one.”

**V Anbu**  
Director General & CEO  
IMTMA

of their booths and the best is to be the award's recipient. Several categories have been formed under this award and exhibitors are encouraged to participate and contribute towards 'minimum carbon footprint'.

### Concurrent events

IMTMA is leaving no stone unturned to ensure an all-round event. The Association, along with EEPC India (Engineering Export Promotion Council), has organized a Buyer-Seller Meet 2019 by inviting potential buyers of machine tools from target overseas markets to explore mutual business opportunities between Indian machine tools and accessories manufacturers.

The i2 pavilion presents an opportunity to R&D and educational institutes to display their R&D capabilities in the arena of metal working to the world.

To add in a dash of fun, there is an inter-college quiz contest on manufacturing technology, mainly for mechanical engineering students. The idea is to bring them up to date on modern manufacturing technologies and make them competitive. In all, IMTMA has kept its promise of making the trade fair larger and more innovative than before.

Continued from 1

milling, tool grinding, and gear cutting machines; CNCs; flexible manufacturing systems; honing, lapping, polishing and deburring machines; robotics & manufacturing automation, and many more.

Concurrent to IMTEX 2019 is Tooltech 2019 that showcases machine tool accessories, metrology and CAD/CAM cutting tools, tooling systems and current trends in the

tooling industry. The current edition of the show has its focus on advanced technologies like 3D Printing, Industrial Internet of Things (IIoT), Automation, Robotics, and Industry 4.0

### Tabs on the current technology trends

To help participants become aware on the global trends in the machine tool space, two new seminars — on 'Factory of Future: Industry 4.0' on January 25, 2019

and another on Additive Manufacturing on January 26 and 28, 2019, are to be held. Speaking on the add-ons, V Anbu, Director General & CEO, IMTMA, said that these technologies are also being showcased in the special pavilions during IMTEX.

IMTMA has also constituted the Eco Design Award to help industry players be in sync with the trend of sustainability. The exhibitors are encouraged to use eco-friendly materials in construction



24 - 30 January 2019

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HALL - 3A/BOOTH - B125

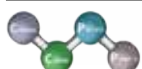
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KNOWLEDGE SHARING

# Getting Future-Ready

The International Seminar on Machining Technologies (ISMT) is much sought after by the manufacturing industry for the value it offers. A snapshot of its 8<sup>th</sup> edition at IMTEX 2019 & Tooltech 2019 that convened the who's who of the industry...



(L-R): Indradev Babu, Vice President, IMTMA; Tim Shinbara, The Association for Manufacturing Technology, USA (AMT); P Ramadas, President, IMTMA; V Anbu, Director General & CEO, IMTMA, during the opening ceremony of ISMT

The 8<sup>th</sup> International Seminar on Machining Technologies (ISMT) organized by IMTMA on 23 January 2019, a day before the week-long metalworking event, had 'Powering Manufacturing Growth and Competitiveness' as its theme. The seminar has received global recognition as a platform for consequential interactions on the latest trends in metal cutting.

Held in conjunction with IMTEX 2019 & Tooltech 2019, the seminar dwelt extensively on new manufacturing strategies, reviewed emerging trends, making users and manufacturers aware on a range of value-added machining solutions to enhance productivity, improve quality and finish of ma-

chined components, in addition to reducing costs.

The inaugural and keynote session by Tim Shinbara, The Association for Manufacturing Technology, USA (AMT) on 'Transformative Technologies: The Impact to Machining, Services and Business Models' presented an overview of the expected changes to come in machining, services and even business models, based on what is happening in the global scenario and what could happen in India too with the advent of transformative technologies like IIoT, data automation, digitalization and smart connectivity.

"The world of technology is growing very rapidly. Digitization has been changing the entire manufacturing landscape. The challen-

ge for manufacturers is to decide on which technology to pick up and how to use that. Out of several modern technologies, perhaps the Augmented Reality will witness adoption at a highly accelerated scale of 40.29 percent. Technologies like Additive Manufacturing and Generative Design will change the entire traditional approach of designing and manufacturing products," he noted.

### Views that matter

Experts from Austria, Germany, Japan, Singapore, Switzerland, the UK, the USA, as well as from India facilitated sessions. Spread over three concurrent sessions and five technology tracks, the seminar covered key technology areas and their application related to metal cutting.

The concurrent seminars covered five topics: Machining & Tools, Large Parts Manufacturing, Additive Manufacturing, Emerging Trends/R&D, and Automation.

The metal working industry is bracing for new challenges and new technologies in view of increasing competition vis-a-vis performance, quality, efficiency and environmental sustainability. There are difficult parts, intricate

There were several interesting topics that renowned speakers from across the industry spoke on. Some of them were:

- New features for large part machining by DMG Mori, Germany
- Designing for Additive Manufacturing by Renishaw plc, UK
- Connected Solution for Digital Machining by Sandvik Coromant, India
- Application of Additive Manufacturing in Tool Engineering by LMT Tools, Germany
- Overcoming Challenges in Difficult-to-machine Materials by Toshiba Machine, Japan
- Improving Dynamic Efficiency and Precision for Large Machines by Heidenhain, Germany
- Dynamic roughing in Multi-Axis machines by Mastercam, USA
- Adaptive Automation by Liebherr, Germany
- Countering Thermal Behaviour of Machines by Indian Institute of Technology, Madras, India.

parts and difficult materials to be managed through metal working equipment and expertise from new technology horizons viz. additive manufacturing, increasing use of robots, micro machining and super finishing, Industry 4.0 and so on. Most of the valued talks were accompanied with case studies and diverse examples from across the globe.

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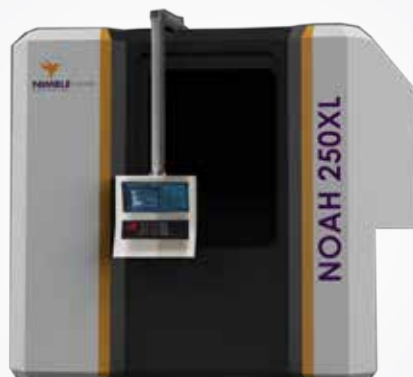
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 Hall 3A, Booth A118

**METALWORKING FLUIDS**

## The Metalworking Fluid Turbo for the Automotive Industry

In order to accelerate basic research in the field of turbocharger manufacturing, Blaser Swisslube, in collaboration with its partners, has carried out extensive tests at the company's own Technology Center.

The production of turbochargers is very complex. Stable and reliable processes as well as high productivity are crucial. Tests carried out at Blaser Swisslube's own Technology Center in Switzerland have clearly demonstrated what can be achieved with carefully planned processes and the right metalworking fluid.

### Increased tool life

In 2013, Blaser began to carry out tests together with a leading tool manufacturer in the field of turbine housing machining. This involved machining heat-resisting cast steel (1.4849, 1.4848 as well as 1.4837). The aim of the tests was to find the ideal tool/metalworking fluid combination, thus creating added value for the customer. The bench-

mark for the testing was drilling and face milling using original components and test components. Thanks to Blaser's Liquid Tool, the tool life of 1,200 drills was increased to over 2,000 drills. When it came to face milling, the tool life was increased to up to 25 percent for rough cutting and approx. 45 percent for finishing.

### Basic research

In close collaboration with a leading OEM in the field of turbocharger production, a further project was launched in 2017. The aim of that basic research project was to answer the following question: 'What is the ideal metalworking fluid strategy for machining turbine housings?' The focus was on process security, cost reduction and process stability. Special attention was paid to the interaction of the cutting materials, metalworking fluid strategies and machining materials.

### Significant cycle time and tool cost reduction

With the help of the findings, one automotive sub-supplier from India was able to reduce its cycle times by an incredible 5 seconds without sacrificing the process security. In another case, a large European car sub-supplier was able to save a total of 20 percent of tool costs



Source: Blaser Swisslube

for drilling, V-band roughing (using bell tools) and milling in the course of a three-shift operation. The metalworking fluid's sump life also significantly increased (by over 50 percent), thanks to the Blaser's new metalworking fluid solution.

### The Liquid Tool by Blaser Swisslube

This project made quite clear that factors such as productivity, economic efficiency and machining quality strongly depend on the choice and quality of the metalworking fluid and know-how of the machining specialists. In addition to the coolant, it's Blaser's expert knowledge in the areas of sales, research and development, technology and customer service that solidify its status as an excellent partner. This professional competence transforms a metalworking fluid into a Liquid Tool, a solution that is tailored to the partner's specific needs.

**CNC ROTARY TABLES**

## Bringing in Innovation

The new URXH and URX Series Rotary Tables from the portfolio of UCAM rotary table products enables users to give higher cutting forces onto the components, thus reducing the cycle time and increasing productivity.

These Rotary Tables are with very high clamping torque generated by the new technology brake discs which are specially processed to generate higher frictional torque. Also, the clamping area is increased to generate higher clamping forces. The URXH Series compared to others, come with 3 times higher clamping torque (800 Nm @ 5 bar pneumatic pressure). Apart from the higher clamping torque, the URXH series is with a specially molded FRP

motor guard which has helped in the reduction of overall weight of the Rotary Table by 6 percent. In URX 200 Rotary Table, the clamping torque is 400 Nm (@ 5 bar Pneumatic input pressure) and 900 Nm (@ 30 bar hydraulic pressure) against 250 Nm and 500 Nm respectively in URH series. Due to this, users can give higher cutting depths for their component. The users will be benefited by faster indexing, reduction in costs and increased productivity.



**UCAM Pvt Ltd**  
[www.ucamind.com](http://www.ucamind.com)  
 Hall 1A, Booth B101

Source: UCAM Pvt Ltd

**LAUNCH**

## Precise component production - DX 135 NVU

The high-performance machine can efficiently meet the demands of the modern manufacturing industry.

DX 135 NVU is another addition to Jyoti CNC's high-performance DX machine series, known for its quick and precise component production with minimum non-productive time. The machine has a high-performance spindle and 8-station bi-directional servo turret to meet the demands of the modern manufacturing industry. DX 135 NVU is a compact footprint machine which enables efficient use of floor area. It can be loaded with a variety of productivity improvement options like bar feeder, bar puller, part catcher, auto door, job probe and tool probe to get uninterrupted machining. Ergonomic design, efficient chip disposal, 90 degree tilting operating panel and Total Produc-

tive Maintenance (TPM) compliance make this machine a versatile option in its cadre. The machine is developed with advanced and improved concepts and also has an attractive guarding with LED.

**Jyoti CNC Automation Ltd**  
[www.jyoti.co.in](http://www.jyoti.co.in)  
 Hall 5, Booth 110



Source: Jyoti CNC Automation Ltd

DX 135 NVU, a compact footprint machine, is all equipped to meet modern-day demands.

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ADDITIVE MANUFACTURING



## Going Places

Additive Manufacturing equipment will see a surge in demand as more Indian manufacturers take recourse to it to design and manufacture new products faster.

Amace Micromatic's amace solutions has worked hard to make Additive Manufacturing (AM) more adoptable. But the company is aware that the cost of metal 3D printing machines continues to be an inhibitor in mass adaptation of the technology. However, the productivity levels of the machine, its technologically advanced features such as in-process inspection of the printed part, have become a standard part of the offerings. Other forms of AM such as the direct energy deposition or the direct metal deposition techniques have a nozzle through which laser beam and powder are passed concentrically focussing on the area where deposition is required. This technique adapts kinematics

very similar to the conventional 5-axis CNC machining centers. Hence, one of the simplest forms of hybrid AM is the combination of the DED technique along with a 5-axis CNC machining center. This will use the same mechanical structures, motion control system and program interface to print the part and perform machining operations in a single setup. "The cost of this technology is largely dependent on the expensive subsystems that get integrated into the machine. Unless there is a significant reduction in some or most of these subsystems, the costs of the technology will continue to be higher. However, with the increasing demand for the additive machines there is a downward trend in their prices," says

"The market in India will grow by around 40 percent CAGR over 3 to 5 years. There is a demand for these products, however it is application specific and process intensive."

Dr Vishwas R Puttige, Business Head, amace solutions pvt ltd.

### Burgeoning demand

"The biggest hindrance in large scale adoption of 3D printing technologies in India is the ability to perceive the value additive techniques can bring to manufacturing. Metal AM techniques for manufacturing have never been comparable to the conventional ones mainly due to the prohibitively high costs of the machines, unavailability of raw materials such as the metal powder or wire locally, maintaining costs, lack of awareness of the technology, low productivity levels and specialized software required for programming," says Puttige. Currently, the awareness about this technology is limited to some of the large and medium scale manufacturers. Since the technology and the process itself is at a primitive stage, its application is limited to prototype developments, reverse engineering, customized developments, small batch production, etc. Globally, with the trend moving towards small batch production of parts and mass customization, there is increase in demand for 3D printing machines. Currently, there are around 100 metal 3D printers and more plastic ones. It is estimated that nearly 20 machines were sold in India in 2018.

TRUMPF India Pvt Ltd  
www.trumpf.com  
Hall 6, Booth D103



ADDITIVE MANUFACTURING

## TruPrint 3000

The 3D Printer is a flexible Laser Metal Fusion (LMF) solution for industrial production.

The TruPrint 3000 is a universal medium-format machine with industrial part and powder management, designed for flexible series production of complex metal components using 3D printing. It is ideally suited to general industry applications. Components can be arranged with utmost flexibility in the large build area of 300 x 400 mm. The TruPrint 3000 is ideal for use in job shops when combined with the industrial part and powder management. It is fitted with a 500 W fiber laser from TRUMPF with a wavelength of around 1,070 nm. The focal diameter, which can be individually adjusted between 100 and 500 µm, makes it possible to react with flexibility to various component requirements.

amace solutions pvt ltd  
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Hall 6, Booth A110b



CNC MACHINING

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VMX42SRTi is the most versatile machine as compared to other Hurco 5-axis machines available in the market. It comes with a tilting spindle and a submerged rotary table of Dia. 600 mm and total bed size 1270 mm x 610 mm. Both have high-performance Torque motor with a chiller unit. The 36 KW integral spindle with 12,000 rpm speed and 118 Nm torque can ensure high-performance machining of all types of materials. It can serve industries like die & mould, aerospace and general engineering. It can be used as 3-, 4- and 5-axis simultaneously depending on the application. The work envelope of 1270 mm x 610 mm x 610 mm allows customers to machine bigger and complex jobs.



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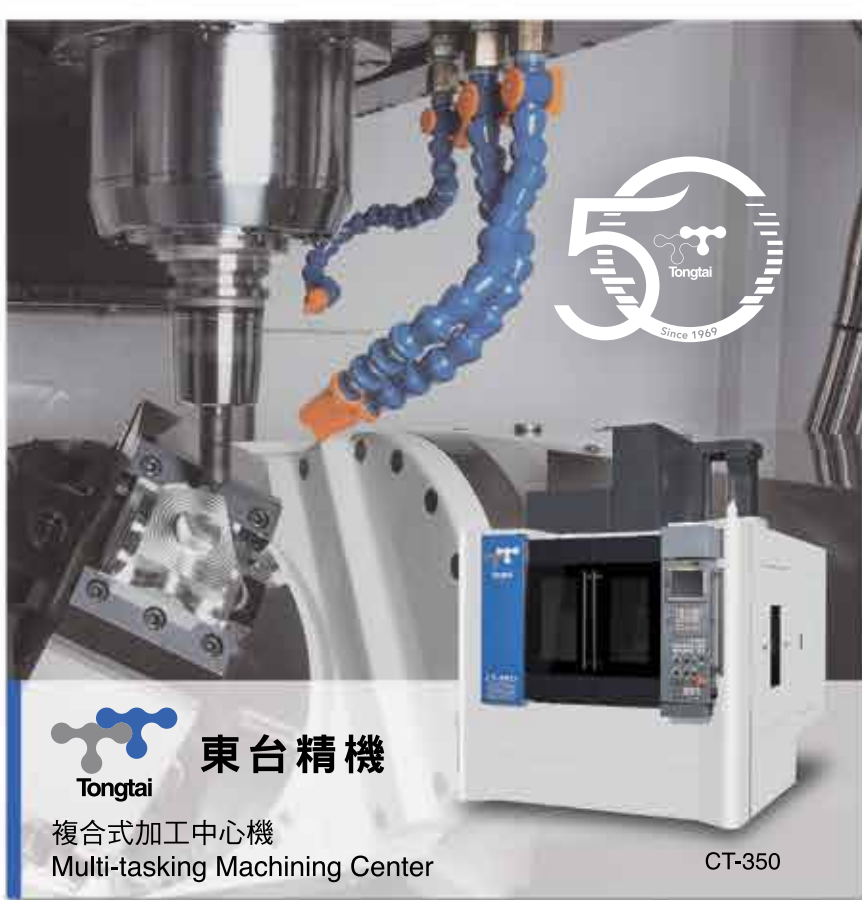
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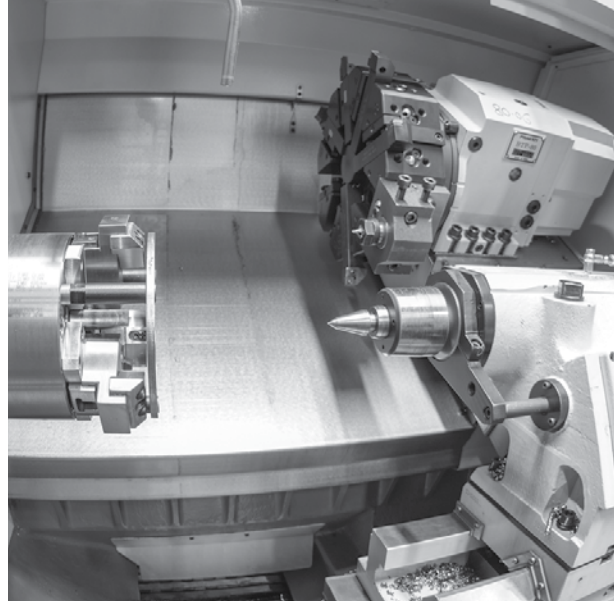
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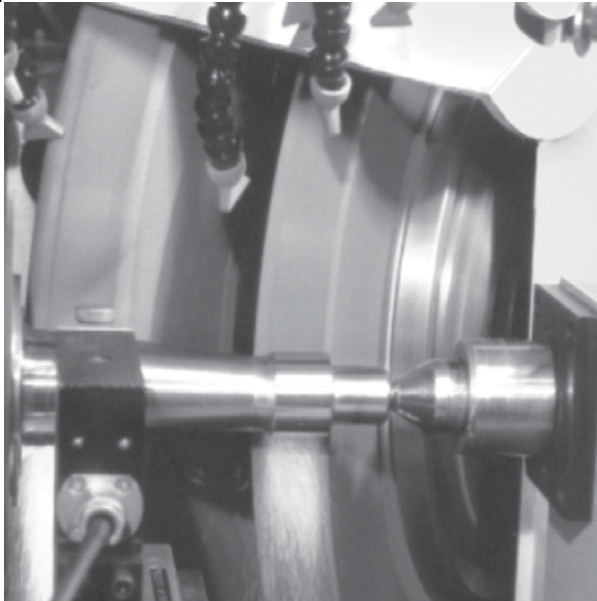
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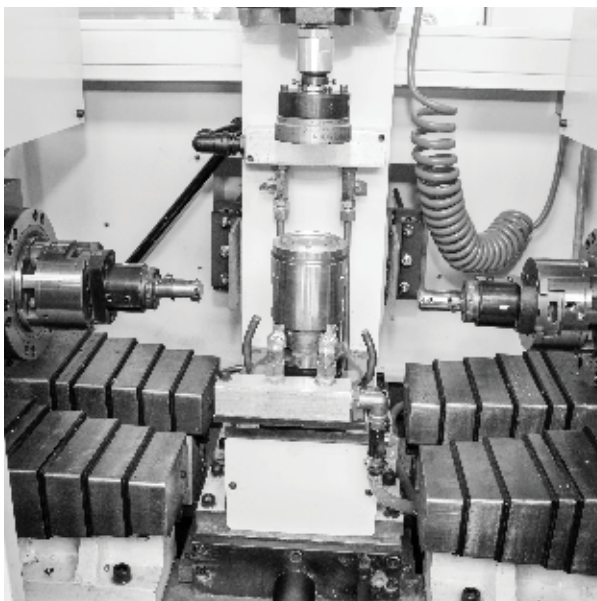


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Source: IPG Photonics (India) Pvt Ltd



High-power industrial fiber lasers, YLS series displayed at IMTEX 2019.

**IPG Photonics (India) Pvt Ltd**  
www.ipgphotonics.com/en  
Hall 5, Booth A128b

Source: IPG Photonics (India) Pvt Ltd



“We are showcasing our technologically advanced high-power industrial fiber lasers, YLS series. The display also comprises our processing heads that offer the desired output in terms of applications.”

**RAJESH SHARMA**  
General Manager - India  
IPG Photonics (India) Pvt Ltd

**FIBER LASERS**

# Laser Sharp

IPG Photonics is showcasing its pulsed lasers for high-end applications in the low power segment that promise desired output to the machine tool segment.

Rajesh Sharma, GM – India, IPG Photonics (India) Pvt Ltd, says that applications like drilling, cutting, marking, and engraving is the company’s main focus during this show. “IPG Photonics has always been at the forefront when it

comes to bringing in technological revolution and this time it is no different,” he adds.

“We are showcasing our technologically advanced high-power industrial fiber lasers, YLS series. The display also comprises our processing heads that offer the desired output in terms of applications. The display rounds up with all kinds of our products catering to the machine tool segment for drilling, cladding, marking, engraving, surface treatment etc. on different materials,” he informs.

**Evolved deals**

Though Additive Manufacturing (AM) has existed for some time, companies are still developing solutions. “IPG Fiber lasers have

played an important role in its increased utilization because of its cost-effective light source and ease of integration to OEM system integrators. Large AM components can take several hours to complete, and the stability and reliability of fiber lasers have been pivotal in the development of laser-based techniques,” explains Sharma.

Similarly, the availability of IPG’s fiber lasers at the multi kilowatt power level is essential for the development of systems and processes with faster powder build-up or powder deposition rates. It is widely thought that the use of higher power fiber lasers will lead to reduced cost and lead times for large custom components.

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## VERTICAL MACHINING CENTERS

# JU 60 for Complex Part Machining

JU60 is a 5-axis simultaneous Vertical Machining Center providing high speed and accuracy in complex part machining with a built-in spindle of 15,000 rpm. It has ideal axes layout with 2 spindle axes and 3 table axes. The machine has a symmetrical structure for thermal stability and comes with an automatic tool changer with 40 tools. For higher accuracy and high rapid traverse rate (X, Y, & Z axes 48 m/min), the JU60 has BBT40 spindle taper. Better tool clamping and higher material removal is achieved due to BBT spindle.

The pre-loaded axial and radial roller bearing helps the VMC withstand the load extended du-

ring machining. It has trunnion type both end supported A axis table. It has a larger clamping area (dia. 500 mm) and Siemens 840 D Control system.

Lakshmi Machine  
Works Ltd  
www.lmwnc.com  
Hall 5, Booth B106



Source: Lakshmi Machine Works Ltd

## INDUSTRY 4.0

Factory of the  
FUTURE  
An Expo on Industry 4.0

# A Meeting of Minds

Indian Institute of Science (IISc) has developed I4.0India@IISc that will help manufacturing companies to develop smart tools.

A major objective of the program, I4.0India@IISc ('I for India at IISc') is to develop/adapt smart tools and technologies, and integrate these into an indigenous smart factory, says Prof Amaresh Chakrabarti, Chairman, CPDM, IISc, Bangalore.

## Spreading awareness at IMTEX 2019

Prof Chakrabarti strongly believes that all MSMEs in the urban sector in Aerospace, Medical and Automobile domains must start reading on and understanding Industry 4.0. Hence, IISc has participated in the show with the agenda to spread awareness among visitors from MSMEs in India on I4.0@India, a smart

Indian Institute of Science (IISc),  
Bangalore  
www.cpdm.iisc.ac.in/  
smartmanufacturing/  
Hall 6, Booth B104d



Smart Inspection System

Source: Indian Institute of Science (IISc), Bangalore



Source: Indian Institute of Science, Bangalore

"Industry 4.0 and advanced digital technologies will soon become the norm for manufacturing in India. Those that adopt early on have a better chance to position themselves favourably in the future."

Prof AMARESH CHAKRABARTI  
Chairman, CPDM  
IISc, Bangalore

factory at IISc, focusing on the following points:

- Indigenous R&D capabilities for Industry 4.0 (I4.0) to support industries to evolve with I4.0 technologies, software, policies, standards and protocols
- Smart factory set-ups at the R&D scale for the industry to explore before deciding on such facilities
- Awareness and training programs, especially for advanced students, R&D personnel and industry leaders in the cutting-edge technologies of I4.0
- Applicable standards, protocols and middleware for integrating a variety of I4.0 devices across vendors
- Current focus of I4.0 is automation and labor empowerment
- Support of entrepreneurship in I4.0

## More features

An integral spindle results in higher acceleration and deceleration, and thus helps achieve better accuracies. It has

viscosity oil filled rear bearing housing resulting in less vibration while cutting, high profile accuracies and better surface finish. Heat control at the source cools the spindle stator, spindle bearings, ball nuts, ball screw support bearings, axes motor flanges and spindle jacket. It acts as a thermal stabilizer which gives better positioning accuracies and precision over long running time.

It has non-contact probing as a standard feature which gives better tool life management and controls tooling cost. The FEM analyzed bed structure gives better machine stability and, thus, better profile accuracy of the machine's components.

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FROM FAR AND WIDE

## The East Beckons

Masayoshi Amano, President, Japan Machine Tool Builders' Association (JMTBA) urges the Indian machine tool manufacturers catering to Auto industry to respond to the global trend of EV development and believes IMTEX could be highly instrumental in the process.

It's not possible to separate the Japanese from their technology and automotive prowess. So, it's only right that Masayoshi Amano, President, Japan Machine Tool Builders' Association (JMTBA) expresses concern for machine tool manufacturers with the automotive industry as their biggest customer. He points to the crucial need for them to respond to the global trend of EV

development and diffusion. "I hope that India's largest international machine tool exhibition, IMTEX, will be a trigger for that," he notes.

According to him, the expo makes for an ideal opportunity to closely get a grasp on the Indian customers' needs as well as machine sales. "This knowledge will help us in the development of machine tools for India," he adds.



Source: JMTBA

"IMTEX is a great opportunity to closely get a grasp on the Indian customers' needs as well as machine sales. This knowledge will help us in the development of machine tools for India."

**MASAYOSHI AMANO**  
President  
JMTBA

### On smart manufacturing

Exports to India has been strong. From January to November 2018, orders grew by 80 percent for the second consecutive year, and in November 2018, reached a record high of over 40 billion yen. Export statistics also more than doubled than in the previous year in 2018. Connecting machines and visualizing the operational status of equipment is now a com-

mon cooperation area. "From here on 'What we will improve' is a competitive area and we hope that a solution that brings together the wisdom of manufacturers will be seen at IMTEX," states Amano.

**Japan Machine Tool Builders' Association (JMTBA)**  
[www.jmtba.or.jp/english/](http://www.jmtba.or.jp/english/)  
Hall 3C, Booth E104

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5. Selection, Assembly and Trouble shooting of Ball Screws
6. Fundamentals of Painting and Coating applications

And many more to come...

For further details and registration, please contact:  
**Indian Machine Tool Manufacturers' Association**  
@ Bangalore International Exhibition Centre (BIEC),  
10th Mile, Tumkur Road, Madavara post, Bangalore - 562 123  
Tel : 080 6624 6756 / 6624 6600 ; Fax : 080 6624 6658  
web: [www.imtmaelearn.in](http://www.imtmaelearn.in) | e-mail: [kng@imtmaelearn.in](mailto:kng@imtmaelearn.in)

IMTMA Technology Centre  
Indian Machine Tool Manufacturers' Association  
[www.imtmatraining.in](http://www.imtmatraining.in)

### GEAR SHAVING MACHINES

## Made in India

With this new machine, Gleason sets a new benchmark in economical shaving.

The new 200SVP Gear Shaving Machine for medium and high-volume production focuses on highly cost-efficient applications and was designed and made in India at the Gleason Bangalore plant. The machine is ideally suited for automotive and motorcycle gears and shafts up to 3 mm in module, 200 mm in diameter and shaft lengths up to 400 mm.

### Plunge shaving

The 200SVP employs Plunge Shaving, a specific shaving process which provides an excellent cost-per-piece ratio and is especially efficient because the shaving process is realized by radial infeed of the shaving cutter requiring only one NC-axis. Additional movements with further NC axes like in diagonal or parallel shaving are

not required. The simple machine design results in a lower investment cost.

Lead modifications like crowning or tapers are ground into the shaving cutter and applied to the workpiece in the plunge shaving process. With plunge shaving, modifications can be easily determined and precisely executed by computer aided grinding on a Gleason 410SCG Shaving Cutter Grinding Machine for instance.

With a footprint of less than 6 sq mt and easy access from all sides, the 200SVP is the perfect machine for either manual loading or automated workpiece handling, for example, by external robotic loading and integrated via I/O signals. The highly ergonomic design benefits machine operators, with large operator and setup doors ensuring direct access to the work area for convenient setup and fast tool change.

Since the shaving head is positioned behind the workpiece axis with the shaving cutter infeed from the rear, the workpiece remains freely accessible from the front which makes manual loading and unloading very convenient and being easily adaptable to automation. The horizontal workpiece axis arrangement benefits the chip flow into the chute avoiding chip accumulation inside the work area.

**Gleason Works (India) Pvt Ltd**  
[www.gleason.com](http://www.gleason.com)  
Hall 5, Booth A124



The new 200SVP Gear Shaving Machine at the Gleason Works booth at IMTEX 2019

Source: Gleason Works (India) Pvt Ltd

M

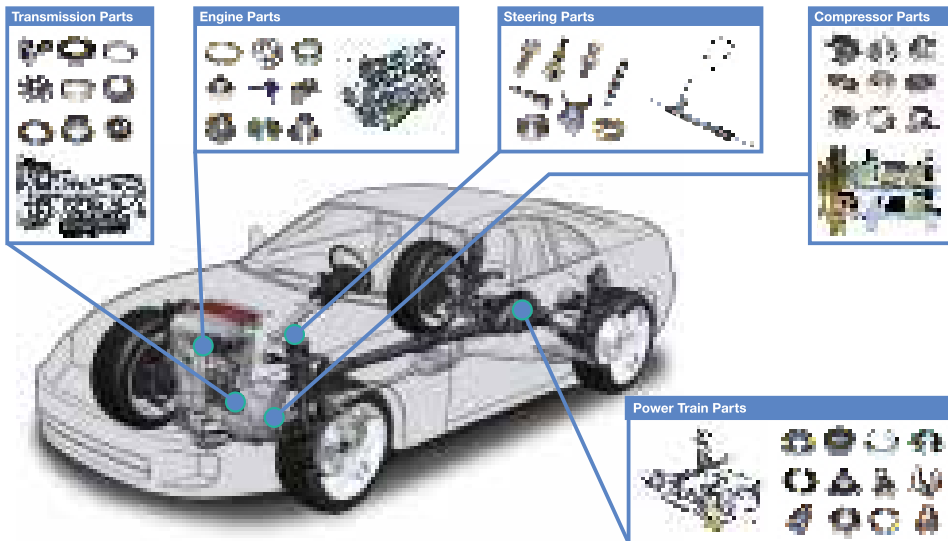
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# TURNKEY SOLUTIONS FOR AUTOMATED TURNING SOLUTIONS



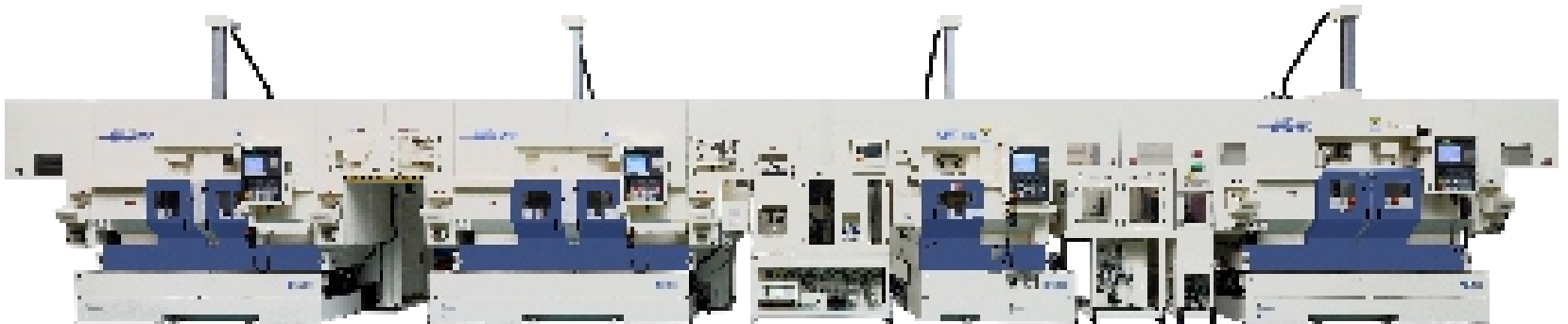
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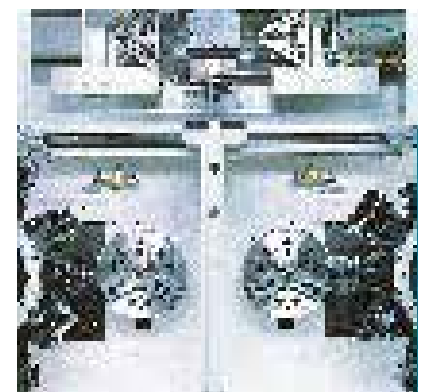
## Meiban - Muratec Turnkey Centre in Bangalore, India

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Hall 5: Stall: C101



END-USER FEATURE

## 'India'genous Tooling

An interesting account of how VP Industries successfully met with a customer's demands of international standard and brought in cost and tool life benefits.

A customer of VP Industries was using 3 flutes flat drill and a step reamer for cylinder bore operation from Germany. Since the tools had to be imported, the customer had to first place an order on an MOQ basis which was 10 in number, creating inventory at its end. The parameters of the imported tools were challenging and in the range of cutting speed of 175 to 200 and

federate 0.6 to 1.2 mm/rev. The flat drill also would work on a solid surface without a core hole.

### Solution to the problem

Although satisfied with the performance of imported tools in terms of tool life and cutting parameters, the customer's major concern was the basic price, the MOQ-based ordering and inventory. Post discussion with the customer, VP Industries arranged for 3 flutes flat drill for trial. In the first cycle, the drill was easily run with existing parameters without any noise or vibration. The tool life achieved was 80 percent to the existing tool life of the imported tools. In the second trial, VP Industries modified the coolant hole position of the flat drill to number 3 instead of the regular number 1.

With three holes opening on the face, chip evacuation improved, and the feed rate was increased by 15 percent. In this trial, the tool life was also increased by 25 percent more than the imported tool. Similarly, for the step reamer, excellent size control was achieved with the required tool life.

VP Industries now regularly supplies flat drills and reamers to the customer for the last three years owing the slew of benefits it received including reduced cost per component and lesser inventory due to prompt reconditioning services and the MOQ for the new tool, which is 3 units.

VP Industries  
www.vpindustries.co.in  
Hall 3B, Booth A110



Source: VP Industries



Carl Zeiss India Pvt Ltd  
www.zeiss.co.in  
Hall 2B, Booth A102

Source: Carl Zeiss India Pvt Ltd

LAUNCH

## VF 1000 for High-Precision Machining

The bridge type construction of the machines ensures low thermal deviation resulting in high precision and excellent finishing on the components. With 2 axes on the spindle and one axis on the table, machining accuracy is more and overhanging of the machine is very minimal. All the 3 axes are equipped with roller guideways. The cutting speed rate of the machine is 20,000 mm/min which makes the machine highly suitable for high-speed machining.



S&T Group  
www.stmcnc.com  
Hall 2A, Booth A106

Source: S&T Group

DATA MANAGEMENT SOFTWARE

## Being Data Right

In today's scenario, a conventional organization running with multiple departments faces challenges in the management of data which comes from various sources and involves many people and their time. ZEISS aims to fill this gap with its PiWeb, a scalable IT solution for quality data management. With the database-supported versions ZEISS PiWeb sbs and ZEISS PiWeb enterprise, one can organize the information flow resulting from Industry 4.0 and, therefore, enhance the quality of their products and productivity.

### Highlights

By leveraging ZEISS PiWeb's one can:


**Create custom part stories for their product:** It can easily create elaborate reports which combine multiple parts and data from different measurement systems into one document.

**Secure investments:** Multi-platform and vendor support, by using open source interface, help integrate measurements from third-party measurement systems and manual gauges.

**Interact with data in 3D:** This is possible using ZEISS PiWeb's built-in CAD capabilities. It can be viewed and analyzed as cloud data from optical measurement systems on a standard laptop.


**Secure Data:** ZEISS PiWeb's integrated user management and encrypted connections help keep data secure.





# TUMAKURU MACHINE TOOL PARK (TMTP)

(A Special Purpose Vehicle of GOI & GOK)  
3<sup>rd</sup> Phase, Vasanthanasapura,  
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Invitation for Allotment of Industrial Plots at  
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**HIGHLIGHTS OF THE PROJECT:-**

- TMTP is being developed in about 530 Acres, as a self contained gated community with world class infrastructure.
- The Industrial Park will have state of the art infrastructure with eco-friendly layout exclusively for manufacture of Machine Tools.
- Power Supply – Distribution network with UG cables and supplementary solar power (Uninterrupted power supply.)
- Dual water supply system - potable & non-potable, underground Sewerage System.
- Power, water and sanitation points at each plot. Ready for "plug & play".

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- 20 Km from Tumakuru town and 90 Kms from Bengaluru, along the NH-4 leading to Mumbai.
- Nearest Airport: Kempegowda International Airport (105 Kms), accessible bypassing Bengaluru City.

**COMMON FACILITIES:-**

- Common Engineering Facility Centre (CEFC); Test and Certification Centre (T&CC); Research & Development Centre (R&D); Incubation Centre for Startups.
- Investment promotion subsidy; Exemption for business development; Incentive and Concessions to MSME's as per Karnataka Industrial Policy 2014-19.

**Sri. Gaurav Gupta, IAS**  
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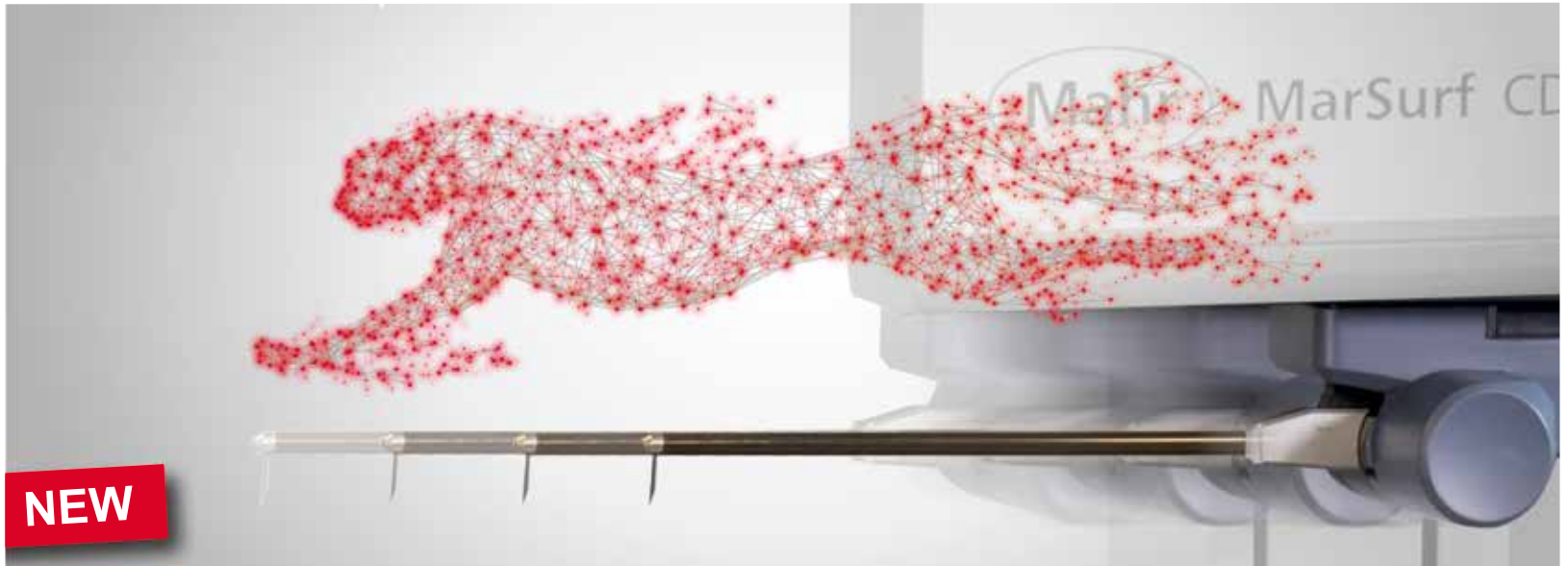
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Mahr presents the Micromar 40 EWRI-L digital micrometer at the IMTEX 2019. Equipped with quick adjustment and sliding spindle, it measures 10 times faster than a standard micrometer and protects the surface of the specimen. The measurement results are easily passed on via the integrated wireless system.

### More efficiency: Measurement of workpieces with different sizes

The new Micromar 40 EWRI-L micrometer from Mahr significantly accelerates the measurement of workpieces and at the same time protects the surface of the test specimens. The reason for this is a quickly adjustable sliding spindle. The spindle makes a 5 mm movement with one revolution of the friction sleeve and can thus be positioned 10 times faster than a standard micrometer. This saves the user a great amount of time, especially when measuring workpieces with different sizes.

### By carefully contacting the workpiece with the non-rotating sliding spindle, two advantages arise

- Scratches are avoided:  
e.g. from grinding dust residues on sensitive and finely machined workpiece surfaces
- Measuring film thickness:  
delicate, thin materials are not twisted or damaged during measurement.

The large display and intuitive operating concept supports users in production and quality assurance – measuring 'reliability, fatigue-free reading and simple operation are combined here.

### Optimization of costs in production and quality control

#### Advantages for the user:

- Increase in productivity of quality assurance in manufacturing plants
- Protection of workpieces
- Reduction of expensive waste

This makes Mahr digital micrometers an important contribution to cost optimization in production and quality control.



Faster measurement of workpieces: the new digital micrometer Micromar 40 EWRI-L from Mahr.

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### DX 170 NVU

CNC Turning Centre

### DX 200 NVU

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### VST 160 NVU

CNC Vertical Shaft Turning  
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### VMC 430 NVU

CNC VMC

### VMC 850 NVU

CNC High Performance  
VMC

### VMC 1260 NVU

CNC High Performance VMC

### NX 3222 NVU

CNC Double Column Machining  
Centre (5 Face)

### K Mill NVU

CNC Bridge Type VMC

### K3X8 Five NVU

5-Axis Bridge Type Machining  
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### MX 9 NVU

5-Axis Universal Machining Centre

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