



## Exhibition Status

As of November 1, 2024





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## **Outline of JIMTOF2024**

Name : JIMTOF2024  
(The 32<sup>nd</sup> JAPAN INTERNATIONAL MACHINE TOOL FAIR)

Theme : "Technologies passed down to the future offers unlimited possibilities".

Dates : November 5 (Tue) - November 10 (Sun), 2024 6 Days

Opening Hours :

West and South Exhibition Halls

9:00~17:00 (until 16:00 on last day)

East Exhibition Hall

10:00~18:00 (until 16:00 on last day)

Venue : Tokyo Big Sight (Tokyo International Exhibition Center)  
All Exhibition Halls

Organizers : Japan Machine Tool Builders' Association/ Tokyo Big Sight Inc.

Supporting Organizations :

Ministry of Foreign Affairs

Ministry of Economy, Trade and Industry /

Tokyo Metropolitan Government /

The Japan Chamber of Commerce and Industry

Cooperating Organizations :

Japan Machine Tool Importers' Association/

Japan Forming Machinery Association/

Japan Precision Machine Association /

Japan Cutting & Wear-resistant Tool Association /

Japan Machine Accessory Association/

Japan Precision Measuring Instruments Manufacturers  
Association/

Japan Grinding Wheel Association/

Industrial Diamond Association of Japan/  
Japan Optical Measuring Instruments Manufacturers' Association /  
Japan Fluid Power Association/  
Japan Testing Machinery Association/  
Japan Gear Manufacturers' Association

Exhibits : Machine Tools/Metal Forming Machine Tools/Machine Tool  
Accessories/Tools for Machines (Cutting Tool & Wear-resistant  
Tool)/Diamond and CBN Tools/Grinding Wheels and  
Abrasives/Gears and Gear Devices/Oil Hydraulic, Pneumatic and  
Water Hydraulic Machinery/Precision Measuring Machines and  
Instruments/Optical Measuring Instruments/ Testing  
Machinery/Controller and related Software (CAD/CAM etc.)/and  
Other Associated Machinery and Equipment, Devices, materials,  
products, technologies, and information related to Machine Tools

Admission Fee :

Advanced Purchase ticket: JPY1,000 (Tax Included)  
Onsite ticket: JPY3,000 (Tax Included)  
Students: Free admission (Advance Registration Required)

Exhibition Space :

118,540m<sup>2</sup>

Scale of Exhibits:

1,262 companies/5,743 booths (as of September 30, 2024)  
Direct exhibitors: 1,023 companies (excluding duplicates)  
(including 53 companies in the AM area with 192 booths)  
[Breakdown of Domestic and Overseas Exhibitors: 5,220 booths  
from 793 domestic exhibitors, 523 booths from 230 overseas  
exhibitors]  
Joint/Internal Exhibitors:239 companies

[Participating Countries/Regions]

19 countries/regions (in alphabetical order)  
Austria, China, Denmark, France, Germany, India, Israel, Italy, Japan,

Korea, Netherlands, Spain, Sweden, Switzerland, Thailand, Turkey,  
UK, U.S.A., Taiwan,

**【Comparison of Scale with Other Exhibitions】**

Name of Exhibition	JIMTOF	IMTS	CCMT	SIMTOS	EMO	CIMT
Year of Exhibition	2024	2024	2024	2024	2023	2023
Period	November 5-10	September 9-14	April 8-12	April 1-5	September 18-23	April 10-15
Place	Tokyo	Chicago	Shanghai	Seoul	Hannover	Beijing
Exhibition Area (m <sup>2</sup> )	118,540	248,000	200,000	102,431	524,285	140,000
Number of Exhibitors	1,262	1,737	1,877	Approx. 1,300	Approx. 1,850	1,582
Number of Visitors ※	(Target) 130,000+	89,020	124,695	101,233	Approx. 92,000	154,957

※JIMTOF, CCMT: Number of Visitors indicates the actual number of visitors. (If a visitor came to the event more than once during the event period, it has been counted as only one visit.)

IMTS, EMO : Number of Exhibitors indicates the number of registered visitors, which include those who did not visit the event.

CIMT, SIMTOS : Number of Visitors indicates the total number of visitors.

**【Exhibition Status】**

Applicant	JIMTOF2022		JIMTOF2024	
	<i>Companies</i>	<i>Booths</i>	<i>Companies</i>	<i>Booths</i>
<i>Japan Machine Tool Builders Association</i>	92	2,438	97	2,433
<i>Japan Machine Tool Importers Association</i>	46	482	47	459
<i>Japan Forming Machinery Association</i>	19	98	16	79
<i>Japan Precision Machine Association</i>	28	205	30	207
<i>The Japan Cutting &amp; Wear-resistant Tool Association</i>	71	429	73	425
<i>Japan Machine Accessory Association</i>	50	398	49	397
<i>Japan Precision Measuring Instruments Manufacturers Association</i>	29	186	28	175
<i>Japan Grinding Wheel Association</i>	13	63	12	56
<i>Industrial Diamond Association of Japan</i>	12	53	10	47
<i>Japan Optical Measuring Instruments Manufacturers Association</i>	13	46	13	47
<i>Japan Fluid Power Association</i>	16	60	16	55
<i>Japan Testing Machinery Association</i>	4	11	4	11
<i>Japan Gear Manufacturers Association</i>	5	20	4	13
<b>Subtotal.....①</b>	<b>398</b>	<b>4,489</b>	<b>399</b>	<b>4,404</b>
<i>Domestic General</i>	340	711	353	661
<b>Domestic General Subtotal.....②</b>	<b>340</b>	<b>711</b>	<b>353</b>	<b>661</b>
<i>Overseas General</i>	33	68	95	127
<i>Overseas Members</i>	37	177	128	359
<b>Overseas Subtotal.....③</b>	<b>70</b>	<b>245</b>	<b>223</b>	<b>486</b>
<b>Total (①+②+③)</b>	<b>808</b>	<b>5445</b>	<b>975</b>	<b>5,551</b>
Additive Manufacturing Area	59	173	53	192
<b>Total Number of Exhibitors (except AM area)</b>	<b>861</b>	<b>-</b>	<b>1023</b>	<b>-</b>
<i>Co-exhibitors</i>	151	-	176	-
<i>Internal exhibitors</i>	75	-	63	-
<b>Total</b>	<b>1,087</b>	<b>5,618</b>	<b>1,262</b>	<b>5,743</b>

\* Co-exhibitors provide their own employees and exhibit their own company's products or services in their booth with the direct exhibitors.

\* Internal exhibitors do not provide their own employees and exhibit their own company's products or services in their booth with the direct exhibitors.

## **II. Highlights of Organizer and Cooperating Organizations**

1. Japan Machine Tool Builders' Association
2. Japan Machine Tool Importers' Association
3. Japan Forming Machinery Association
4. Japan Precision Machine Association
5. Japan Cutting & Wear-Resistant Tool Association
6. Japan Machine Accessory Association
7. Japan Precision Measuring Instruments Manufacturers' Association
8. Japan Grinding Wheel Association
9. Industrial Diamond Association of Japan
10. Japan Optical Measuring Instruments Manufacturers' Association
11. Japan Fluid Power Association
12. Japan Testing Machinery Association
13. Japan Gear Manufacturers' Association

## **1. Japan Machine Tool Builders' Association (JMTBA)**

JIMTOF2024 will be held on the largest scale ever, utilizing the entire Tokyo Big Sight with a total of 5,743 booths from 1,262 exhibitors. In addition, an “Academic Area” will be newly established in the South Hall 4 as a place for direct communications between students interested in the manufacturing industry and exhibitors. Following JIMTOF2022, a special parallel exhibition, “Additive Manufacturing Area in JIMTOF2024,” will be held on the first floor of the South Exhibition Hall.

Furthermore, with the aim of communicating JIMTOF 2024 to the world, the YouTube site “JIMTOF INSIGHTS” (<https://www.youtube.com/@JIMTOF-INSIGHTS>), which covers a wide range of topics related to manufacturing, mainly in the machine tool industry JIMTOF INSIGHTS is now open to the public. In addition to attracting visitors to JIMTOF, we aim to raise awareness of the event among students, who will lead the next generation of the manufacturing industry. During JIMTOF2024, a project linked to the video content will be held on the multi-purpose stage in the Academic Area.

JIMTOF2022 attracted 114,158 visitors, making it the first real JIMTOF in four years, despite the limited number of visitors due to the COVID-19 pandemic. However, we were pleased to have a large number of companies actively exhibiting to attract new customers and promote their companies, as well as to engage in lively business discussions with visitors. At JIMTOF2024, these restrictions will be relaxed, and we expect even more visitors to attend.

On the other hand, machine tool orders received in FY2023 amounted to 1,453.1 billion yen, down 14.8% from the previous year, only the 8th highest level ever, but there are high expectations for a rebound from the second half of 2024.

In the domestic market, which is the main target of JIMTOF, the demand for machine tools is generally firm, including the need for automation in response to the labor shortage.



With the 1.5 trillion yen level in sight for the current fiscal year, the upcoming JIMTOF is highly anticipated as a once-in-a-lifetime opportunity that will contribute to further stimulating domestic capital investment.

To capture this business opportunity, 98 JAMA member companies will exhibit at JIMTOF 2024, and more than half of them are expected to showcase their new products for the first time in the world.

Under the theme of “Technologies passed down to the future offers unlimited possibilities,” all exhibitors will showcase their latest machine tools and cutting-edge technologies at JIMTOF.

Based on the recent technological trends, we expect to see the following key trends of the exhibits at JIMTOF 2024.

**(1) Progress in Kotozukuri**

Currently, the manufacturing industry is promoting initiatives based on keywords such as “digital,” “green,” and “resilience,” and there is a growing trend to provide services that improve productivity and efficiency through the use of these machines, rather than simply selling the machines themselves. At this year's JIMTOF2024, we expect to propose and exhibit comprehensive solutions that include not only conventional MONOZUKURI but also KOTOZUKURI

**(2) Approaches on expanding the use of digital technologies and decarbonizing and saving energy**

In recent years, with the improvement of simulation technology, we have seen case study of technology that digitally reproduces machine characteristics to predict the machined surface of a workpiece, automatically calculates machining time and manufacturing costs by utilizing 3D models on a simulation, and estimates power consumption and CO2 emissions.

In addition, the use of sensors for advanced monitoring of machine conditions, idling of peripheral equipment, and optimum control of coolant flow, among other efforts to curb CO2 emissions, are also in progress. At JIMTOF 2024, it is expected that further progress will be made in the use of these digital technologies and energy-saving measures, and new initiatives to improve productivity will be the focus of much attention.

### **(3) Use of Robots to Support Automation and Labor Savings**

The entire manufacturing industry is facing an urgent issue of how to respond to the shortage of labor due to the decline in the working population. At the most recent EMO and IMTS exhibitions, there were many initiatives to support automation and manpower saving by utilizing cooperative robots and AGVs, and this trend is expected to continue at JIMTOF.

The use of robots is expected to further expand, not only in loading and unloading of workpieces, but also in some processes of machining, cleaning, and measurement, as well as in cases where robots contribute to stable production by operating in combination with automatic program correction devices that use image sensors.

### **(4) Advancement of Additive Manufacturing (AM) Technology**

The advancement of AM technology is expanding the range of products from prototypes to actual products and from conventional manufacturing processes to processes that achieve higher functionality and lighter weight through AM especially for molds and medical parts.

Recently, exhibits have included not only stand-alone AM machines but also system solutions that include both front-end and back-end processes, such as simpler support removal after molding, as well as examples of applications to large components.

At JIMTOF2024, a special “Additive Manufacturing Area” will be set up in the South Exhibition Hall, as in previous years, with 192 booths from 53 companies. A “Special Seminar Room” will be set up in the exhibition hall, where seminars by AM-related experts and domestic AM-related organizations are scheduled to be held during the exhibition period ([https://jimtof.org/jp/evt\\_AM.html](https://jimtof.org/jp/evt_AM.html)).

The Japan Machine Tool Builders' Association (JMTBA) invites you to join us on November 6, 2024 from 1:00 p.m. for a panel discussion and introduction of the latest technologies by our members.

#### **(5) Announcement of Latest Machine Tool Technologies**

##### **-IMEC (The 20<sup>th</sup> International Machine Tool Engineer’s Conference) will be Held-**

Machine tools are the core machines of manufacturing. The advancement of machine tool technology influences the advances of the manufacturing industry globally. The 20<sup>th</sup> International Machine Tool Engineer’s Conference (IMEC) will be held with lectures and presentations on cutting-edge research related to machine tools in Japan and abroad, with the aim of contributing to the improvement of machine tool technology, which plays such an important role in the industry.

On November 7 and 8, researchers and engineers from Japan and abroad will give presentations on 14 interesting themes under the overall theme of “Technologies passed down to the future offers unlimited possibilities“. During JIMTOF, more than approx. 50 presentations of cutting-edge machine tool-related research results from domestic and overseas research institutes will be made at the poster session to be held in “Academic Area” of South Hall 4. Members of the participating institutions will be on hand from 9:00 to 12:00 on November 7 and 9 to explain the contents of their research.

An exclusive website (<https://www.jmtba-imec.jp/>) is now available, and we look forward to welcoming you to both the IMEC Oral and Poster Sessions.

## **2. Japan Machine Tool Importers Association (JMTIA)**

At JIMTOF 2024, Japan Machine Tool Importers Association (JMTIA) is exhibiting imported machine tools, peripheral equipment, and cutting tools as well as many other products equipped with the latest technologies in 459 booths from 47 member companies of Japan Machine Tool Importers Association.

Similarly, four companies are scheduled to exhibit in the AM area with 56 booths. We are also planning an event for students at JIMTOF 2024, which has been requested by Japan Machine Tool Builders' Association.

We would like to make known the role of Japanese trading companies specializing in imports and Japanese subsidiaries of overseas manufacturers in cutting-edge manufacturing in Japan through our association members, which will celebrate its 70th anniversary next year in 2025 and has supported manufacturing in Japan.

The trend of yen depreciation, which began in 2022, has greatly accelerated since the beginning of 2024. This has had a significant impact on the selling prices of imported machine tools, equipment, tooling, and tools in Japan, and has also affected domestic sales and import results.

Due to the global pandemic of new coronavirus infection (COVID-19) since the beginning of 2020, amount of imports decreased in all models to 68.6 billion yen in 2020, 64% of the previous year, due to lower factory utilization rates, delays in electronic component supply, and transportation infrastructure issues. However, imported machine tools recovered to 72.7 billion yen in 2021, and further increased by 20% to 87.3 billion yen in 2022, and slightly increased to 88.3 billion yen in 2023, but are expected to decrease by 12% to 77 billion yen in 2024 due to yen appreciation.

Imports of peripheral equipment have been recovering steadily, despite a drop in imports after the Covid 19, and imports reached record highs in 2022 and 2023. Imports are expected to remain at the same high level in 2024.

However, the impact of energy issues and high interest rates, in addition to the Russian invasion of Ukraine starting in February 2022 and the ongoing fighting between Israeli forces and Hamas in the Gaza Strip, is a cause for concern.

Among the diverse range of imported machine tools, all of them are environment-, resource-, and energy-friendly machines with excellent application software, multifunctional multitasking machines with high precision and high efficiency, and high-precision machines suitable for fine machining, etc. They are mainly used in the automotive, construction machinery, general industrial machinery, electrical machinery, energy, and aircraft industries, etc. They are the foundation of Japan's world-leading "Monozukuri."

In addition, although the shift of production to EVs is under review in the two years from JIMTOF 2022, you will be able to see the most advanced technologies in Europe and the U.S. regarding labor-saving and unmanned production.

At JIMTOF 2024, we are introducing a variety of measuring equipment with extensible software supporting high precision machining, CAD/CAM systems used worldwide, various cutting tools and tool grinders that allow long-term use at high cutting speeds as well as tool jigs that support a large variety of machining that have all been made to advanced U.S. and European leading edge technological standards.

The exhibits, however, have not been limited to European and U.S. products as they also include products from the rapidly developing Asian countries, which are now venturing into the machine tool field and are willing to respond to diverse user needs.

We would like to take this opportunity to invite you to consider introducing the most advanced machine technology of our excellent imported machine tools.

By improving a product's after-sales service, developing software suitable for user needs, and establishing service-oriented organizations that offer manufacturing, sales and service in an integrated effort with overseas manufacturers, we would like import machine tools to further penetrate the Japanese market from here onwards. In this way, they will contribute to the growth of Japan's *monozukuri*.

JMTIA is hosting a "Swiss Day" as described below in a joint sponsorship with the Swiss Embassy, the Swiss Business Hub and the Swiss Association of Mechanical and Electrical Engineering Industries (SWISSMEM) for deepening mutual relations between Swiss machine tool manufacturers, all member companies in this association and their customers. We are looking forward to further deepening our strong exchange with Switzerland, with which we have strong ties in the machine tool industry.

**SWISS DAY LUNCHEON**

**(Jointly sponsored by the Swiss Association of Mechanical and Electrical Engineering Industries (SWISSMEM), the Swiss Embassy, and the Swiss Business Hub)**

**Time: November 6, (Wednesday) 12:00 - 14:00**

**Venue: Tokyo Big Sight Conference Tower 1F, Room 101**

In addition to the above event, a get-together party aiming to welcome association members, their customers and overseas manufacturer guests, is scheduled to be held on November 7, (Thursday) from 17:30 on the Conference Tower 1F, Room 101 of Tokyo Big Sight (Same venue as Swiss Day). We are looking forward to seeing many of you there.

### 3. Japan Forming Machinery Association (JFMA)

At JIMTOF 2024, 16 companies from Japan Forming Machinery Association (JFMA) will have exhibits in 79 booths. Each company offers timely mechanical and technical solutions, which will appeal to machine tool users. We look forward to seeing you at our booths.

#### 〈Exhibitors at JIMTOF 2024〉

Itaca Japan Inc.	E-PLAN Co.,Ltd.
S.T-Link Co., Ltd.	Authentec Co., Ltd.
OHMINE INDUSTRY CO., LTD.	Opton Co.,Ltd.
Koyo Giken Inc.	KOMORI SAFETY DEVICE LABORATORY CO., LTD.
Shibuya Kogyo Co., Ltd.	Tokyo seimitsu hatsujyou Co., Ltd.
Trumph Corporation	Bystronic Japan, Ltd.
FABACE Co., Ltd.	FUJIKIKO Co., Ltd.
Freebear Corporation	Murata Machinery, Ltd

#### < Exhibits of Each Company >

1. Itaca Japan Inc.  
Laser equipment, processing samples, SDGs software
2. E-PLAN Co.,Ltd.  
Metal sheet washing machine, Super alkaline ionized water generator, Waste liquid circulation filtration system
3. ST-LINK Co.,Ltd.  
Deburring machine, 3D surface plate
4. Authentec Co.,Ltd.  
Washing machine, Deburring machine
5. OHMINE INDUSTRY CO., LTD  
Chip conveyor (vertical type, floor type, turning type), Non-touch system (hopper, lifter), chip conveyor (hinge type)



6. Opton.Co.,Ltd.  
Tube bender, Robot bender, Tube former, DDV servo pump
7. Koyogiken Inc.  
Table spot welding machine, Spot welding machine, Tensile testing machine
8. Komori Safety Device Laboratory CO., LTD.  
Safety devices for press brakes
9. SHIBUYA CORPORATION  
Laser processing machine
10. Tokyo seimitsu hatsujyou Co.Ltd.  
Sparkon Plus, Sparkon (chip transfer and discharge conveyor), Shuttle Guard (chip protection telescopic cover), Screw Cover (ball screw dust cover), Wing bends
11. Trumpf Corporation  
TruArcWeld1000 (automatic welding machine), TruMatic3000 fiber (Punch laser multitasking machine), TruStore Lift 31 30 <TMC1530B> (Stocker for sheet metal processing)
12. Bystronic Japan, Ltd.  
ByCutStar (Laser cutting machine), ByBendStar (Press brake)
13. FABACE Co., Ltd.  
Strong alkaline electrolytic water flat plate cleaning equipment for sheet metal processing, next-generation hybrid caulking machine, TIG welding support robot for precision sheet metal processing, automatic tapping machine
14. FUJIKIKO Co., Ltd.  
Desk rotary (turntable type hydraulic press machine), mini bender (press brake), drilling machine NC, burring tapper (burring and tapping machine), buritor (deburring machine)
15. Freebear Corporation  
Various freebears, various air floating freebear units, carts with freebears
16. MURATA MACHINERY, LTD.  
Press brakes

In addition, the “MF-TOKYO 2025 the 8th Press, Sheet Metal & Forming Exhibition” will be held in July next year by our association under the subtitle “Human- and Earth-friendly Technology, Building a Sustainable Future.” We are looking for exhibitors for this exhibition.

**URL:<http://mf-tokyo.jp>**

An early bird discount to MF-Tokyo 2025 is being offered until October 31, 2024. Please consider joining this Fair as we would like the Fair to become the gathering of many companies in industries related to forming machines.

#### **4. Japan Precision Machine Association (JAPMA)**

In June 2012, this association changed its name to “Japan Precision Machine Association”. It functions as an industrial organization that swiftly responds to the various multiple and complicated needs of the times by contributing to the continued development of the precision machine industry and to the member companies involved with the precision and ultra-precision *monozukuri* industry. As one activity to contribute to Japan’s *monozukuri* as well as the development of safer, more secure, civilized societies in the world, this association is aiming for an “Ultra-precision Solution Group” with the theme of, “The Untiring Challenge of Ultra-precision”. The association will have 195 booths from 29 companies exhibiting in East Exhibition Hall 1, and 12 booths and 2 companies in West Exhibition Hall 2 (one company will spill over in to East Exhibition Hall 1) with a total of 207 booths and 30 companies at the show.

The main users of our association have already increased in the area of precision devices such as automobiles, cameras, clocks, electrical equipment, and office automation equipment. Recently, however, there has been an increase in demand from the precision machine field for mobile phones, PCs, LCD-related products, smart phones and miniature motor components, etc.

The total value of precision machine orders received in 2020 was 86 billion yen, a significant decrease due to the COVID-19 pandemic. However, in 2021, orders received were almost the same as before the COVID-19 pandemic, reaching 157.7 billion yen, thanks to an increased demand for automobiles, semiconductors, and other products, as well as the relaxation of restrictions on activities. Furthermore, although capital investment was 164.4 billion yen in 2022, it will be 132.3 billion yen in 2023 due to the continuing trend toward wait-and-see capital investment.

The demand for precision machine tools is expected to continue to grow as they increasingly contribute toward solving trade issues among major countries,

environmental issues such as global warming, as well as DX, automation, and AI. Technological innovation in these user industries is intense, and their needs are becoming more demanding in a wide range of areas, such as higher speed, high and ultra-precision, higher efficiency, miniaturization, energy conservation, and environmental responsiveness, so they are expected to evolve faster and faster to meet specific requirements.

Japanese manufacturers have to enhance their sales efforts in overseas markets in order to respond to this trend. The technological innovation of these customers is intense, and their needs are equally diverse and more demanding. To respond, the Japan Precision Machine Association needs to evolve even faster and act speedily to meet the specific demands being made. In this background, we have been enforcing a ‘Made in Japan’ certification with the goal of better appealing Japanese manufacturing and Japanese products in the global market.

At JIMTOF 2024, this association is taking the “Ultra-precision Solution Group” as its shared theme against the backdrop of needs in this field, and with each member company acting to satisfy user needs, the association is exhibiting a wide variety of machines and equipment as well as giving actual demonstrations in answer to specific demands for accuracy, efficiency and space.

Moreover, the winning products of “The *Monozukuri* Contest” under the theme of “Japanese Craftsmanship” will be on display at East Exhibition Hall 1 in front of our association’s main sponsor office, so please do drop by to take a look.

## 5. Japan Cutting & Wear-resistant Tool Association (JTA)

In June 2015, Japan Solid Cutting Tools Association and Japan Cemented Carbide Tool Manufacturers Association merged to become Japan Cutting & Wear-resistant Tool Association (JTA).

JTA's goal is to foster the development of the machine tool industry in Japan and, thereby, contribute to Japan's industrial development. Both Associations were originally established in 1948. Japan Solid Cutting Tools Association was an organization of manufacturers of cutting tools used for cutting and plastic working machining. Meanwhile, Japan Cemented Carbide Tool Manufacturers Association was an organization of manufacturers of cemented carbide, cemented carbide tools and their powdery materials.

While each organization has its own history, in recent years both have had to solve difficult issues such as standardization, environmental issues, and the joint holding of the World Cutting Tool Conference (WCTC), which led to the merger of the two organizations.

In October 2022, it became a General Incorporated Association, and as of September 2024, Japan Cutting & Wear-resistant Tool Association (JTA) has 139 member companies with a total production value of JPY 500 billion. Building on tradition, JTA will continue to thrive as the largest machine tool related association that is indispensable for Japanese *monozukuri*.

At this year's JIMTOF2024, Japan Cutting & Wear-resistant Tool Association (JTA) will be exhibiting in West Hall 1 with 425 booths from 73 companies!

The need for machine processing, which is at the heart of *monozukuri* has become more and more diverse and advanced. In order to play a role in realizing these needs, member

companies are striving to develop world-class machine tool technology by selecting the optimum materials from special steel, cemented carbide, CBN/diamond, etc., designing the optimum shapes, and utilizing optimum coating technology.

Products displayed at JIMTOF 2024 are the results of this R&D. JTA believes that these products help to both improve and innovate our customers' production systems and that you can find products that match customers' specific needs. When you see the demonstrations or videos on large screens shown in the booths of exhibiting companies, JTA believes that you can understand the machine tool manufacturing companies' concept to pursue high-precision and high-efficiency as well as drastic cost reduction. JTA is also proposing solutions for environmental problems, safety issues and an aging society. Machine processing is an efficient processing method as it is both energy and resource efficient, but it can play a more diverse role in improving environmental and safety conditions by dry and semi-dry processing as well as improving processing accuracy.

Member companies compete with both domestic and foreign companies to promote technology development, and the technology is now used in fields such as automobiles, machine tools, electrical appliances, steel, medical equipment, aircraft and even atomic energy. The fact that many companies apply for the Association's "Technology Achievement Award" indicates that member companies are working hard to develop new products. New products for some companies are taking a nearly 50% share of the total sales. The competition is driving the technology level of Japan's machine tool industry.

These new products will be displayed at JIMTOF 2024. JTA hopes that you will enjoy new products and new technologies, which we believe will help you to envision an exciting new future.

JIMTOF 2024 is an excellent opportunity for users of machine tools to check the products that Japan's leading machine tool manufacturers are proudly presenting and will give you the opportunity to think about the future of *monozukuri*.

In addition, an English interpreter with expertise in the machinery field will be stationed at JTA's secretariat booth in the Atrium of West Exhibition Hall 1 to provide assistance to overseas visitors at each member booth and organize tours of the exhibition hall. In addition, a "Cutting Tools Handbook" and a "Revised Glossary of Carbide Tool Terms" will be available for purchase, if required.

Please visit JTA's booth. We are looking forward to seeing you at JIMTOF 2024.

## **6. Japan Machine Accessory Association (JMAA)**

Japan's machine industry has been a driver of technological innovation, contributing to the sophistication of Japan's industrial structure. It has been central to both Japan's economy and the global economy, playing a key role in the growth of the international economy over the years. Machine accessories refer to a diverse range of tools indispensable for machines, including parts (clutches, brakes, ball screws, linear movement guides, spindles, and shaft coupling, etc.); work chucks (chucks, magnetic chucks, and turning centers, etc.), tool chucks (tooling, etc.); and accessories (round tables, dividing heads, machine vises, jigs and tools, etc.). Machine accessories are being used in an increasing number of fields due to both the advances and diversification of the machine industry. Today, machine accessories made by Japan Machine Accessory Association (JMAA) member companies are used in a variety of industries beyond the machine tool industry including industrial machines, semiconductor-manufacturing machines, FPD manufacturing machines, robots, OA equipment, and auto and precision machines, among others. With their stable and high performance, these products support the advances of industries and promote automation, contributing to the economic growth both in Japan and globally as well as the realization of a sustainable society.

Machine accessories are indispensable components for innovation in the machine industry. JMAA member companies keep increasing the value of machine accessories by adopting new technologies and approaches in order to consistently meet various demands on the demand side.

These days, expectations for machine accessories made by JMAA member companies keep increasing. The member companies work hard to try to improve by learning from others in order to contribute to the growth of the industry as a whole.



At JIMTOF2024, 49 JMAA member companies will present their latest technologies and products at West Exhibition Hall 2.

- **Parts**

Ball screws and linear movement guides are widely used not only in machine tools, but also as positioning devices in semiconductor manufacturing devices and flat panel display production equipment. In recent years, advances in high speed and high precision equipment have led to demands for a diverse range of functions. Products that provide these functions (maintenance free, energy-saving, high-load capacity, high-rigidity, high-precision, long life, lightweight, compactness, low-noise, and environmental measures) are being exhibited at JIMTOF 2024. Spindles for various applications, bearings for machine tools and various industrial machines, shaft couplings for the latest servo motors, non-excited brakes of ultra-compact design, and high-precision fastening element parts are also being exhibited.

- **Work Holding Tools**

The Work Holding Tools on display at JIMTOF2024 are products that match the different types of work pieces for machining, that keep the number of required setups during tool jig changeovers to a minimum, and have high clamping strength to securely grip the part for machining; these chucks also have dust control and dust prevention measures; products with superb maintenance saving features; and products developed with dedicated specification and designs that match the users' preferences. Various other magnet chucks and magnet-applied products will also be exhibited.

The turning centers on display at JIMTOF2024 include high RPM, high rigidity and high precision centers, compact centers that can be selected for specific purposes, work hole seating detection centers, air blow centers with lower replacement rates, and custom-made centers made for each type of application.

- **Tool Holders**

Tool holders and devices being exhibited at JIMTOF2024 include various types of tooling such as NC tooling, tooling for specialized machines, and tooling for multi-tasking machines, etc., which realize a high gripping force, high balance, compactness, and slimness, etc., in order to respond to performance improvements such as a higher speed, higher precision, higher rigidity, and higher efficiency of machine tools, hardened and tempered holders, and hardened and tempered devices. Boring tools that expand holes after machining and processing them with high precision are being exhibited. Moreover, other products developed to meet various user needs, including energy conservation and environmental friendliness, total tooling systems for diversifying the spindle interface, and products developed for grinding difficult-to-cut materials are also being exhibited.

- **Accessories**

Dividing attachments being exhibited at JIMTOF2024 include various CNC circular tables to meet diverse and high-speed user needs such as high-precision, high-rigidity, high clamping power, compact sizes, and also workpiece clamps and precision machine vises that provide high durability as well as numerous functions and high precision.

There are also non-contact and high performance tool pre-setters, automatic liquid temperature controllers to meet various needs for temperature control in machine tools that have been designed with the environment in mind; oil lubrication devices to supply grease as required and, thus, achieving maintenance-free; all-in-one coolant pumps with filtering; various marking-related equipment ranging from specialized tools to hand tools; tool jig parts for needs ranging from general-purpose to dedicated jigs; all types of covers to match customer specifications; light-weight tool pots employing specially reinforced plastic as well as dust collectors; and mist removal equipment that are ideal as a countermeasure for dust and mist generated in the work processes within the factory being exhibited at JIMTOF 2024.

- Automation-related

Many exhibiting members will present proposals for products, technologies, and systems that utilize and advance the technology of machine tools, such as robot integration and robot-related equipment.

- Others

On the first day of JIMTOF2024, Akihiro Teramachi, Chairman and CEO of THK Corporation, who is also the Chairman of JMAA, will deliver a keynote speech.

In addition, a map of the entire venue, including information on the exhibits of our member companies, will be available at our booth located in the atrium in front of the West Hall 2 where the machine tools will be exhibited.

## **7. Japan Precision Measuring Instruments Manufacturers Association (JPMIMA)**

Established in April 26, 1954, with the membership of 53 companies, the Japan Precision Measuring Instruments Manufacturers Association (JPMIMA) is the sole association for the manufacturers of precision measuring instruments. The association has long relations with JIMTOF as they have continued co-sponsoring and exhibiting at JIMTOF since the very first exhibition.

At JIMTOF2024, 29 member companies will exhibit in 160 booths at East Exhibition Hall 7. The record-scale exhibit includes the latest measuring equipment such as 3D measuring instruments, surface roughness measuring instruments, contour shape measuring instruments, roundness measuring instruments, laser trackers, venire calipers, micrometers, dial gauges, plug gauges, other kind of gauges and small tools such as precision levels.

Here is an introduction of some of the latest products:

### **● Mitutoyo Corporation**

At JIMTOF 2024, Mitutoyo will exhibit solutions to customer issues under the two themes of “Mitutoyo's Smart Factory” and “Solutions for Customers' Individual Circumstances.” We will propose measurement solutions to solve various problems that occur in the manufacturing field, from incoming inspection to parts processing and assembly.

#### **■ 3D Measuring Machine Robot System MiBOT e-system**

In response to the increasing need in recent years for automated measurement against the backdrop of labor shortages, we have standardized the automatic measurement system and released a package that can be introduced inexpensively and easily. The easy implementation of this system will

significantly improve the operation rate and reduce man-hours.

- Automatic Measurement Program Generation Software for 3D Measuring Machines MiCAT Planner

MiCAT Planner is automatic program generation software that frees you from the need to create measurement programs that require knowledge and experience with measuring machines. Anyone can easily generate high-quality measurement programs, which contributes to the efficiency of measurement operations.

- High-Speed, High-Precision Digimatic Micrometer Cantamike MD-E  
Four times faster spindle travel than standard micrometers. Speedy movement and excellent accuracy enable more efficient measurement operations. A wide variety of functions to meet the needs of the measurer, such as collision detection with the workpiece, tolerance determination, and calculation functions, enable comfortable measurement at the work site.

- TOKYO SEIMITSU CO., LTD.

Under the slogan of "Experience the ACCRETECH Value", our booth will provide a valuable opportunity for visitors to experience first-hand the products and services offered by the Tokyo Seimitsu Group in response to customers' measurement needs.

In addition, we will introduce a full range of "Electric Vehicle x EV" applications. In particular, we will exhibit optimal measurement solutions in the field of e-Axle/Battery/Electronics production, which is a core component of electric vehicles ("EV"), along with many new products and automation packages for measurement.

- Non-contact 3D surface roughness/shape measuring instruments "Opt-scope NEX" series  
3D white interference microscope Opt-scope realizes high resolution of 0.01nm uniformly in vertical direction regardless of lens magnification.

Nano surface properties can be measured with a low-magnification lens, enabling high-speed measurement of a wide area in a single shot. The new “Opt-scope NEX” series lineup includes an all-in-one installation type (DX type) that allows stress-free measurement by the operator, and a model that can be added to the desktop installation type (SD type) with options (camera, column height, surface plate size, fixture options, etc.) to meet your measurement needs.

- Optical Shaft Profile Measuring Machine "Shaftcom"

"Shaftcom" is an optical shaft profile measuring machine specialized for measuring shafts and other shaft-shaped workpieces, enabling high-speed, high-precision, non-contact evaluation of dimensional and geometric tolerances.

In addition to the non-contact optical measuring method, a contact probe can be optionally installed to measure keyways and notches.

- **OBISHI KEIKI SEISAKUSHO**

“Measuring Technology for Manufacturing! and “Takumi no waza (skill of a master craftsman)”, we propose new manufacturing possibilities and measurement solutions to realize high quality and reliable products for our customers.

- Squareness Measuring Instruments [HC106]

Easy measurement of squareness! Measurements can be taken at the processing site!

- Gear Eccentricity Measuring Attachment (SHH type)

Renewal of Gear Eccentricity Measuring Attachment (SH type)

Revised measuring element holding method prevents deterioration of sensitivity and tracking performance.

- Data Logger

Saves measurement data of roll calipers and eccentricity testers in memory  
Equipped with wireless communication (Wifi) function to a PC, etc.

- **DAI-ICHI SOKUHAN WORKS CO.**

- **Optical Non-contact Small Bore Measuring Instrument "IDM-30EX2"**

The "EX2" is a reference measuring instrument used by calibration laboratories in Japan, with even higher measurement accuracy than the "EX" as  $\phi 0.1$  to  $\phi 30$  mm inner diameters can be measured in  $0.01 \mu\text{m}$  increments. No individual error is required for this high-precision measuring machine. "IDM-100EX2", which can measure from  $\phi 0.1$  to  $\phi 100\text{mm}$ , is also being exhibited.

- **Automatic Dispersibility Inspection Machine ADIM-Compact**

ADIM-Compact is a lightweight and compact version of ADIM, which inspects the size and dispersion of material particles in powder materials. Automatic operation from sample sweep to inspection and judgment, eliminating errors by the inspector and ensuring stable inspections. Inspection results are stored in the computer and can be retrieved at any time.

- **Automatic Thread Inspection Unit Bee-1 Lite**

The inspection function of the "Automatic Tapped Hole Inspection Unit Bee-1," which automatically performs troublesome and time-consuming tapped hole inspections, is retained, while the functions are concentrated on "pass" and "fail" inspections of screws. The unit can be flexibly used in in-house inspection systems, automated inspection systems built into robot systems, and other applications.

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- **Nakamura Mfg. CO., LTD.**

Our new, high-speed and high-precision image measurement instrument is being displayed. Also, we are exhibiting a digital torque wrench and wireless calipers under the theme of "Keeping a Record of Measurement".

- **TECLOCK Co., Ltd.**

TECLOCK advocates "Measurement DX". The digitalization of "measurement" in "manufacturing" and the feedback of accumulated data analysis results to production sites can dramatically improve the QCD (Quality, Cost, Delivery) of products and parts.

- SmartMeasure®

This instrument is an IoT solution that enables the easy digitization and analysis of measurement data, which is available in three types: cloud, server, and local.

- Bluetooth Digital Measuring Instruments

Bluetooth is built into the measuring instrument to enable measurement data digitization. The lineup includes calipers, micrometers, and indicators, as well as sickness gauges, depth gauges, and more.

- SmartTester

This instrument automatically measures the hardness of rubber to achieve stable and highly accurate measurements. The "GX-700II" is ideal for measuring thin rubber and O-rings, and the "GX-02" is a series of hardness-compatible gauges. These instruments are being exhibited.

- **OZAKI MFG. CO., LTD.**

OZAKI MFG, CO., LTD. is exhibiting a wide range of precision measurement instruments for different purposes including dial gauges, lever-type dial gauges, digital gauges and precision thickness gauges.

- **HEIDENHAIN K.K.**

Under the theme of "The Path to Green Manufacturing," we will exhibit solutions such as air purge-less operation encoders that reduce CO2 emissions and system costs and



improve machine utilization rates, and on-machine measurement systems that help reduce non-productive time and improve productivity.

### **True Image Technology**

Robust encoders for machine tools that do not require air purging in harsh environments

Absolute linear encoder LC 6 series

Absolute angle encoder RCN 1 series

### **On-machine Measurement Systems**

Wireless touch probe for workpiece measurement    TS 460/TS 760

Vision system for tool inspection    VT 122

Broken tool detector    TD 110

### **● Hexagon Metrology K.K.**

Hexagon has over 180 years of history in the measurement technology industry. Backed by the experience gained over this long history, our measurement instruments provide high precision and accuracy in every aspect of our business, from the laboratory to the manufacturing floor.

Hexagon is also leading innovation in quality inspection technology, evolving from contact to non-contact measurement and from manual to automated processes. At JIMTOF 2024, Hexagon will showcase how its innovative technologies can help customers solve their challenges in four areas.

### **Precision Coordinate Measuring Machines:**

Hexagon's precision coordinate measuring machines, which enable non-contact measurement, are used in a wide range of applications in the manufacturing industry, from the manufacture of precision components to large engine assembly equipment. We provide highly accurate results through physical measurement and extensive data capture.

### **Hexagon Portable 3D Measuring Machine:**

Absolute Arm, the new handheld 3D scanner, is ideal when portability and high accuracy are required. It enables accurate 3D measurements regardless of location and is used for prototype verification, product design, and quality control.

### **Automation:**

Automation and labor savings in measurement will become a necessity in the future, and Hexagon offers a wide range of measurement equipment, hardware and software.

### **Quality Control Software:**

Ensures quality throughout the production lifecycle, shortening lead times and reducing costs. We will improve productivity, customer satisfaction, and continually improve processes.

## ● **FARO Japan, Inc.**

FARO Japan combines various 3D scanners, 3D measuring instruments, and software to provide solutions tailored to your applications and challenges.

### ■ **FARO Quantum Max ScanArm**

Arm-type 3D measuring machine that enables both contact measurement and non-contact measurement using a 3D scanner in a single unit.

### ■ **FARO 8-Axis Max**

8-axis rotary table that significantly reduces measurement time without the need to reinstall the measuring instrument or move parts.

### ■ **FARO Vantage Mas Laser Tracker**

Ideal laser tracker for measuring large parts and machine alignment. Complex shapes can be measured using 6Probe.

## ● **DIATEST JAPAN LTD.**

The BMD plug gauge replaces the air micrometer as a new precision inner diameter measurement system. It does not require air piping and, thus, the maintenance cost is

reduced. It is durable and can work under severe conditions, and its manual measurement can get stable results without errors deriving from personal equation. An automatic measurement embedded inline is used by many customers. Its size ranges from 2.0mm to 270m. Many accessories are available and can be used in a wide range of applications.

- **Volume Graphics Co., Ltd.**

The software boasts the top market share in industrial X-ray CT data analysis. It is capable of measuring and analyzing external and internal shapes and materials, automating the process, and creating STL and tetrahedral meshes (linkage with CAE), all in a single software package to improve productivity in manufacturing. We will present the latest information on software and solutions using CT data.

- **Ametek co. ltd**

Three measurement instruments by Taylor Hobson's business unit, a well-established manufacturer of roughness and roundness measurement instruments, and Zygo business unit, a leader of interferometer and optical device manufacturing are being exhibited for the first time in Japan.

- **YAMAGUCHI SANGYO CO., LTD.**

YAMAGUCHI SANGYO CO., LTD. offers precision equipment from all over the world, with a focus on equipment for maintaining the accuracy of machinery and equipment. We offer many products that can be converted into numerical values and data, regardless of the skill of the operator. Here are some of the main ones:

- Next Generation Vibration Measurement Iris M
  - A completely different system from conventional vibration measurement
  - Comprehensive, non-contact vibration measurement
  - Identification and prevention of fatigue failure
- Equipment Diagnosis by Ultrasonic Vibration Measurement SDT340
  - Diagnosis of all types of factory equipment and early detection of

abnormalities

- Ultrasonic waves generated from friction, collision, and turbulence are quantified.
- Vibration sampling up to 100 kHz sampling frequency limit.
  
- Constant monitoring of bearing grease LUBExpert ON-GUARD
  - Automatic injection of the right amount of grease at the right time
  - Extends bearing life and improves productivity
  
- Motor Diagnostic System MCE MAX
  - Non-destructive motor trend control system using electric current
  - Capable of diagnosing both stopped and running motors
  
- Digital Microscope Omni3
  - No PC required, just connect to the monitor and use.
  - Customizable to select only the applications you need

### **SEMINAR for the Effective Use of Precision Measuring Instruments**

Although precision measuring instruments are becoming increasingly popular in Japan's manufacturing industry, there are still many areas where they are not being utilized, depending on the industry segment and application. In addition, with the rapid development of digital technology, there is a need for major changes in the precision measurement field, such as the discussion of DX-compliance in the manufacturing field, and a major shift to EVs in the automotive industry field. This seminar is designed to contribute to the further revitalization of Japan's manufacturing industry while strengthening the foundation of basic technologies.

If you are interested in attending, please download the invitation from our website (<http://www.jpimia.gr.jp/information/>) and also register at our industrial association.

Date: Thursday, November 8 (Fri.), 2024

Time: 10:00 - 16:25

Place: Room 101, 1F, Conference Tower, Tokyo Big Sight

Number of participants: 60 on-site, 100 online (registration will be closed when the maximum number of participants has been reached)

Participation fee: Free of charge (Textbook fee: 1,000 yen)

(For online participants: ¥1,000 for a textbook + ¥1,000 shipping fee)

\*Textbooks are free for regular and supporting members.

#### Program

Please see (<http://www.jpamia.gr.jp/information/>) for details.

- |               |                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------|
| 10:00 - 11:00 | Expectations and Challenges for Utilization of Large-scaled Xray CT in Cyber Physical Engineering              |
| 11:00 - 12:00 | Evolution of Technology and Future Prospects by Combining Metal Additive Manufacturing and Metrology           |
| 12:00-13:00   | Lunch break                                                                                                    |
| 13:00-13:30   | Application examples of 3D printers and challenges in their shape measurement                                  |
| 13:30~14:00   | Introduction of application examples of 3D printers and Efforts for Environmental Response and Problem Solving |
| 14:00 - 14:35 | Characteristics of filter groups specified in ISO 16610 series and their selection method                      |
| 14:35 - 14:45 | Break                                                                                                          |
| 14:45 - 15:10 | Error Evaluation of Contour Shapes on Tapered Surfaces Using 3D Coordinate Measuring Machine                   |
| 15:10 - 15:35 | Variation of Measuring Force in Copying Measurement and Its Effect on Measurement Accuracy                     |
| 15:35 - 16:00 | Key Points of Measurement with a 3D Digitizer                                                                  |
| 16:00 - 16:25 | Remote Company Support by Virtual Public Laboratory System                                                     |

## **8. Japan Grinding Wheel Association (JGWA)**

Since its establishment in 1950, the Grinding Wheel Association (JGWA) has been providing indispensable processing technologies of “cutting, grinding, and polishing” to the manufacturing industries including machine tools, steel, shipbuilding, automobiles, and electric appliances.

We have sponsored and exhibited at the Japan International Machine Tool Fair (JIMTOF) since its first fair in 1962.

Aiming at high value-added products required by the new market in the age of SGDs and DXs, we are boldly taking up the challenge of developing (1) energy-saving products to reduce energy consumption such as electricity and gas, (2) environment-friendly products to improve the working environment, (3) technology development for difficult-to-grind materials and fine grinding by reducing the thickness of work pieces, (4) highly efficient and ultra-precision grinding technology, etc.

At JIMTOF2024, we will exhibit value-added products with further improved efficiency, precision, quality, and longevity, as well as new products that provide all kinds of solutions for environmentally friendly grinding technology, etc., as a result of our past research and development, and propose them to attract the attention of many users.

New products and highlights from exhibitors will be introduced below. Please stop by for a demonstration of the latest technology and products.

- **KURE GRINDING WHEEL CO., LTD. (4 booths)**

**(Summary of Exhibit)**

As a general abrasive product manufacturer, we are exhibiting a range of products that offer ultra-precision, high-performance grinding as well as polishing products that match the continuously evolving work materials and processing environment.

### **(Main Machines on Exhibit)**

- ① Grinding Wheels
- ② Diamond and CBN Wheels
- ③ Industrial abrasive cloth paper

### **(Key Products)**

#### ■ Highly Efficient and Accurate Ceramic Grain SG Grinding Wheel.

Ceramic abrasive grains with a "microcrystalline structure" are micro fractured during the grinding process, so the cutting edge is maintained and the workpiece dimensional change is less than with conventional grinding wheels.

It contributes to high quality machining and cost reduction in a wide range of applications.

#### ■ Double-headed Surface Grinding Wheels

We offer a variety of wheel designs, such as double-layer wheels and wheels with unique grooves, to meet customers' requirements for maintaining the flatness and parallelism of workpieces with higher precision. We can also adjust the amount of grinding to the customer's requirements in terms of vertical and horizontal grinding.

### ● **MIZUHO Co., Ltd. (4 booths)**

#### **(Summary of Exhibit)**

Mizuho Co. Ltd. is going to introduce new products and remarkable products under the theme of "Smooth! Polishing the Future with Grinding Stones".

#### **(Main Machines on Exhibit)**

Grinding wheels, super-finishing wheels, honing wheels (super-abrasives and general abrasives) and grinding wheels for brittle material are being exhibited.

#### **(Highlights)**

- Development of environmentally friendly eco-material grinding wheels
- Pursuit of energy conservation and a wide variety of grinding wheels
- Next-generation general-abrasive super-finishing wheels for high-precision

grinding

- Metal grinding wheels that consider the earth's resources
- Diamond wheel for wafer grinding that realizes high quality processing

We are introducing new products and technologies with processing examples. Please visit our booths.

● **TACS CORPORATION (3 booths)**

**(Summary of Exhibits)**

TACS CORPORATION will exhibit and demonstrate grinding and polishing wheels made in Germany, where we will start our new agency business this year. German-made grinding wheels are characterized by high grinding power and long product life. A technical team from Germany will be visiting Japan and will be at the booth all day to demonstrate and present the features of each product.

**(Key Products)**

- Various resinoid grinding wheels
- Electroplated diamond cutting, grinding and shaft grinding wheels
- Various brushes, sanding disks, etc.

● **NORITAKE CO., LIMITED (15 booths)**

**(Summary of Exhibits)**

Under the theme of “The Future of Manufacturing, Noritake's Challenge,” Noritake will be presenting a variety of new products that meet the needs of grinding and polishing technologies and the electrification of mobility in an environment that is changing dramatically with the development of a carbon-neutral society. We also offer a variety of new products to meet the technology requirements for grinding and polishing and the electrification of mobility. We will also exhibit filtration equipment and carbide circular sawing machines from our Engineering Division.



### **(Key Products)**

#### ① Double-layer Gear Grinding Wheel Gear Ace Cross

Amid demands for improved gear tooth surface accuracy and cost reduction, this product integrates a conventional gear grinding wheel and a grinding wheel for polishing processes. Conventional gear grinding is followed by coaxial grinding, enabling both process integration and high-precision machining. High-precision machining improves the surface roughness of the tooth flanks, thereby improving transmission efficiency during meshing and reducing gear noise. Gear Ace Cross V×R and Gear Ace Cross V×F are available according to processing conditions and required accuracy.

#### ② Metal Wheel for Highly Efficient and Accurate Grinding IdealMetal

IdealMetal is a metal wheel for double-head surface grinding and vertical-axis surface grinding, with a special bond structure that enables on-machine grinding and shape correction. High cutting ability is maintained, and high efficiency and precision are realized.

It can be used for a wide range of work materials, including brittle materials such as hard metals and sintered metals of Sic, etc., and is effective for grinding large and thin workpieces with a high degree of difficulty.

#### ③ Sludge Solidification Device (Smart Briquetter)

This device solidifies sludge generated during parts processing. With the recent focus on sustainable social activities, Noritake has pursued a technology that compresses processing sludge, which used to be treated as industrial waste, and separates it into briquettes and squeezing fluid (coolant fluid) to make it a resource again.

The high compression ratio enables briquetting with high specific gravity and low water content, which can be recycled into steel. In addition, coolant liquid, which used to be disposed of along with sludge, can be reused, resulting in a significant reduction of industrial waste.

### **(Main Products on Exhibit)**

#### ① Vitrified and Resinoid Grinding Wheels

#### ② Vitrified CBN Wheels

#### ③ Diamond Wheels

- ④ Coated Grinding Grains, Grinding Oils, and Machines and Equipment
- ⑤ Filtration Equipment, and Carbide Circular Sawing Machine

**(Relevant Industries)**

Automobiles, steel, bearing, tools and molding, medical, turbine, electric materials and energy

● **FSK INC. (4 booths)**

**(Summary of Exhibits)**

Founded in 1940, FSK INC. has a history of over 80 years.

All of our products, including general shaft grinding wheels, which have the No.1 share of the domestic production market, are based on technology cultivated through years of experience. Products carefully crafted with the latest processing facilities and inspection equipment that support the technology will be on display.

**(Highlights)**

- General Abrasive Grains: <New Product> Shafted for Hard-to-grind Materials  
We will respond to a wide range of needs for machining difficult-to-cut materials with the introduction of new products.
  - Expansion of the lineup of the “MS Series” ceramic abrasive products
  - The new “RS Series” has improved grinding power while reducing heat generation during grinding.
- Electrodeposition  
“Electroless Plating” and “Adjustment Polishing” provide both long life and good surface roughness.  
They are highly evaluated especially in mass-production processing of fine diameters of less than  $\phi 1$ mm.
- Diamond Bond Type  
The vitrified diamond grinding wheel “Poreless”, launched in 1970, is still

active in the aspherical glass lens field more than 50 years later.

Further quality improvement has been achieved through formulation in a newly introduced clean room.

- CBN Bond type

For internal grinding of precision molds with jig grinders, etc., we are not only concerned with the quality of the grinding wheel, but also with the accuracy of the shaft through in-house machining of a super steel shaft using the latest equipment.

In addition, we have a large inventory of ultra-steel shafts available for quick delivery.

## ● **TEIKEN Corpotation (4 booths)**

### **(Summary of Exhibits)**

TEIKEN CORPOTATION will offer a total grinding process including grinding wheels and diamond/CBN wheels using our unique pore technology. In addition, a precision molding grinder will be set up in the booth to demonstrate the processing of new products. We will also introduce our grinding know-how at the same time.

### **(New Products)**

- Dresser for Cylindrical Grinding Machines “Synergy Dresser CG1/2”  
Truing and dressing of resin bond diamond CBN wheels can be performed simultaneously, quickly and accurately.
- CBN Wheel for Mirror Finish “TBNF Wheel”  
Mirror finishing of steel-based workpieces can be done efficiently and with high quality. It changes the common sense of mirror finishing = diamond wheel.
- High Performance Diamond Wheel “TDCS Wheel”  
This diamond wheel is suitable for difficult processing such as simultaneous grinding of ceramics and molds. It uses particularly tough, high-quality diamond

abrasive grains.

- **Tipton Corp. (4 booths)**

**(Highlights and Exhibited Products)**

Tipton Corporation is exhibiting our state-of-the-art barrel finishing machines and polishing stones, as well as our advanced barrel simulation contract analysis service.

- **Heavy Pressure Barrel Finishing Machine “Mighty Mild”**

The patented “low-speed, high-pressure flow” technology reduces processing time by one-third, halves the wear of abrasive stones, and greatly reduces dents and chips on the workpiece.

- **Dry Barrel Finishing Machine "Drag Finish"**

With twice the speed of conventional models and a wide range of work holding angles, even long workpieces can be processed in a short time. keyless chuck reduces setup time. Ideal for grinding tools and artificial bones.

- **Precision Micro Media “E Series”**

Despite its minute size, it has high dimensional accuracy and can both “eliminate media clogging” and “polish deep inside corners,” which have been long-standing problems in barrel finishing.

- **Resin Media for Gloss “SAC”**

“SAC” is a resin media with high polishing power and mirror finish. Lightweight and soft to the touch, it is ideal for soft metals.

- **Super Mirror Finishing Media “SMD”**

Diamond fine grains facilitate honing process of cemented carbide tools and at the

same time enable mirror polishing with scratch-free surface roughness

$Ra < 0.005\mu\text{m}$ . Improved wax also doubles the service life of conventional media.

■ Analysis Tool Visualizing Barrel Finishing

Transparent rotating barrel “FH-3” and the latest “Barrel Finishing Simulation” optimize the polishing conditions.

● Nitolex Corporation (9 booths)

**(Summary of Exhibit)**

As a manufacturer of grinding wheels, Nitolex Corporation develops and manufactures products with a complete made-to-order system, tailor making each product based on our customer’s request. This year, we are exhibiting our new “PLX Bond Wheel” and “ZEAL Wheel” as well as various grinding wheels and super-abrasive wheels tailored to customers' industries.

**(New Products)**

“PLX Bond Wheel” is a high-strength bond type of ‘polynoid wheel’ using resinoid bond. It maintains the excellent surface quality that is one of the advantages of polynoid wheels, while extending the life of the wheel without losing its sharpness.

“ZEAL Wheel” is a vitrified diamond wheel newly developed based on our proprietary compounding technology. It has realized the formation of a more uniform grinding wheel structure and improved sustainability of sharpness compared to conventional product. These characteristics are effective in solving problems such as improving the dimensional accuracy of workpieces, eliminating chipping, and extending wheel life in grinding diamond and CBN sintered materials.

● **NEWREGISTON Co., Ltd. (2 booths)**

Under the theme of "We realize the total solution for cutting, grinding, and polishing from cutting tools to tools! ", we are exhibiting the "Blue Serac Offset Type" ceramic grain product with a grinding power of another dimension, the new "Raijin Slim II Electric Mini Grinder", and the "Kujin Straight" pneumatic straight grinder that brings out 100% performance of NRS carbide and metallic ridge bars. We will also have demonstrations in our booth, so please come and see, hear, and try grinding.

We also propose grinding support tools utilizing robot systems!

(Exhibits)

- Ceramic abrasive grinding disc "Blue Serac Offset Type"
- New electric mini-grinder "Raijin Slim II" and dedicated grinding wheel "Mini Series"
- New cutting wheel "Zeta Cut"
- Pneumatic straight grinder "KUJIN STRAIGHT"
- NRS carbide bar "rv-cut ACC Coating"
- Electroplated diamond bar "METALLIDGE BAR"
- New abrasive belts "serac belt red", "serac belt white for aluminum", "zed belt blue"

● **MITSUI GRINDING WHEEL Co., LTD. (4 booths)**

**(Summary of Exhibits)**

With more than 100 years of know-how since its establishment, we will contribute to the global market with new technologies and products as a comprehensive manufacturer of grinding wheels.

We will introduce our new bond for CBN wheels and demonstrate our vacuum chuck equipment.

## **(Outline of Exhibited Products)**

### <General Grinding Wheels>

Resinoid grinding wheels with toughness and elastic deformation: <Fine Elastic Grinding Wheels> Used for mirror finishing of injection needles of Ti rolls. Uniform structure, moderate toughness, and elastic deformation enable stable machining.

Stable adsorption: <Vacuum chuck> Stable adsorption is obtained on all surfaces with an even structure during the entire term. We are planning to demonstrate the equipment.

Dress gear shape transfer processing: <Gear honing> Two tooth shapes and tooth striations are obtained by dress gear shape transfer processing.

### <New Bond for Superabrasive Grain>

New bond for superabrasive grain: <Bond name C00/C55> Wear resistance + high strength (high peripheral speed) Suppresses dressing resistance and improves wear resistance.

Deep groove machining of slits: The groove depth of CBN discs can be designed to be deeper than before.

Super-abrasive products by work material type: <T Series> Proposals tailored to the work material can be made through the development of a new bond.

Diamond tools for split lapping machines: <BRIEMUR> Detachable by magnetic attachment, the parts made in sections are combined on the magnetic surface plate to form a single fixed abrasive surface plate.

### <Others>

We will also introduce our carbon neutral initiatives and our Thai base/MGT.

Please feel free to stop by.

- TAKAKURA KOHGYO CO., LTD. (2 booths)

## **(Summary of Exhibits)**

As a "professional solution company for grinding and polishing", we are exhibiting

products that contribute to better grinding and polishing.

**(Exhibited Products)**

- ① CF grinding wheel (cylindrical, centerless)
- ② Non-abrasive dresser (for flat grinding, cylindrical, double-headed)

**(Highlights)**

- ① CF grinding wheel that combines finishing and sharpness
- ② Dresser that improves dressing efficiency and corresponds to wheels of various shapes

We propose ourselves as a “professional solution company for grinding and polishing”.

● **NANIWA TOISHI CO., LTD. (1 booth)**

(Summary of Exhibits)

We will offer our wide range of grinding wheels (vitrified, resinoid, and magnesia methods), diamond tools, and man-made grinding materials that we manufacture for a variety of industrial fields.

(Exhibit Items)

- ① Grinding wheels (round wheels, stick wheels)
- ② Diamond tools
- ③ Abrasive materials



## **9. Industrial Diamond Association of Japan (IDA)**

### **- ENVIRONMENTALLY FRIENDLY AND CONTRIBUTING TO BETTER PRODUCTIVITY AND ENERGY-SAVING THROUGH DIAMOND and CBN TOOLS -**

Industrial Diamond Association of Japan (IDA-J) hopes that the 32<sup>nd</sup> JIMTOF2024 contributes to the development of machine tools both in Japan and overseas.

Diamond and CBN tools support the work, which are indispensable for "Cut, Sharpen and Polish" tasks in the leading edge industries of the day including electronics, semiconductors, and automobiles.

Members of the Diamond Industry Association of Japan (IDA) are constantly striving for research and development in order to respond to the diversification of work materials and the demand for higher machining accuracy. In particular, IDA members are striving to contribute to the society by realizing tool performance required by the market through the research and development of abrasive grains and bonding materials to respond to environmental issues and new technologies.

At JIMTOF2024, the abrasive grain manufacturers and cutting tool manufacturers are exhibiting numerous diamond and CBN abrasive grains and cutting tools developed with the latest technologies, which comply with machining materials.

The following is a list of exhibiting members and highlights of some exhibitors.

#### **[ Exhibiting Companies]**

ABICO R&D Co., Ltd.

A.L.M.T. Corp.

ARAI SHOKAI CO., LTD.

Asahi Diamond Industrial Co., Ltd.

GLOBAL DIAMOND CO., LTD.

ILJIN JAPAN CO., LTD.  
INTERNATIONAL DIAMOND INC.  
JTEKT GRINDING TOOLS CORPORATION  
NIPPON DIAMOND CO., LTD.  
TENRYU SAW MFG. CO., LTD.

**(Highlights)**

● **ARAI SHOKAI CO., LTD.**

ARAI SHOKAI CO., LTD. have a wide range of rough diamonds (synthetic and natural), diamond and CBN powders, and other materials required for tools and optical equipment.

At JIMTOF2024, we will exhibit mainly CVD single crystal diamonds from Diamond Elements Pvt. Ltd. Of India

<Diamond Elements Pvt. Ltd. and the features of CVD monocrystalline diamond >

- Type IIa, diamond with extremely low impurity content
- One of the few integrated manufacturers in the world, from growing seed crystals to manufacturing and shipping.
- They have a factory specializing in HPHT (high temperature and high pressure) treatment to improve the crystallinity of CVD single crystal diamonds, and we treat all diamonds.
- They can respond to requests for various shapes such as size (larger than 20 mm), specifications (thickness: 0.1 to 8.0 mm), hemispherical and spherical shapes, etc.

● **Asahi Diamond Industrial Co., Ltd.**

At JIMTOF2024, under the theme of “What diamond can do,” we will exhibit products that enable high-precision, high-efficiency machining that only diamond tools can do in every industry, including automotive, bearing-related, electronic parts, and cemented carbide tool machining,

This year's exhibition will be divided into five sections: Tool & Die, Semiconductor, Transportation Equipment, Cutting, and Brand Corner.

We look forward to seeing you at the Fair

- **Global Daimond Co.,Ltd.**

For about 50 years, we have consistently offered diamond and CBN superabrasives that meet the needs of the times and customers in the former Soviet bloc, South America, the United States, Europe, and China.

We are also actively introducing our own state-of-the-art inspection equipment and have established acceptance and shipping inspections in Japan. Please stop by our booth to discuss not only our products but also our inspection services. Also, please feel free to ask us about any problems you may have with superabrasives, such as requests for custom sizes that are stricter than JIS standards.

**< Highlights >**

- Grain size custom products  
Introduction of grain size custom products with specified D50 value  
Custom shapes
- Custom Shape Products  
Introduction of custom products with uniform grain shape.
- New CBN products  
Introduction of FBN-413 that can be supplied in a wide range of sizes from 18/20 to 400/500  
Introduction of FBN-HF which can replace general abrasive grains
- Single crystal CVD diamond  
Introduction of our lineup

- **INTERNATIONAL DIAMOND INC.**

“Micro Finish” diamond files can also be used with mechanical pencils. The lineup includes round files with outer diameters of  $\phi 0.3\text{mm}$  to  $\phi 1.0\text{mm}$  and square files with outer diameters of  $\square 0.5\text{mm}$  to  $1.0\text{mm}$ . They are very popular for removing burrs and chips from plastic, cemented carbide, various metals, ceramics, and glass.

And now, a NEW item will be added to the catalog of the Hand Meister Series.

“Slit Finish,” a much thinner file than conventional files, has a slit width of 0.3 mm to 0.6 mm and comes in three shapes.

Please stop by our booth and try them out.

- **JTEKT GRINDING TOOLS CORPORATION (formerly Toyoda Van Moppes Corporation)**

JTEKT Grinding Tools Corporation is a manufacturer specializing in superabrasive wheels and diamond dressers.

At JIMTOF2024, we will propose solutions to grinding process issues in various fields and also introduce our activities in carbon neutrality in grinding and manufacturing processes.

We will also be accepting inquiries about anything in the grinding process, so please feel free to stop by.

- **NIPPON DIAMOND CO., LTD.**

We will exhibit our proven products such as “Gran Creep: Re”, a resin wheel for high load machining of cBN, which has realized long life while maintaining sharpness by using special resin, as well as automotive parts, EV-related products, glass and ceramic products, etc.

We are also pleased to announce the release of our new “GRAND METAL” product line, which has been under development for some time and is capable of high-load machining.

In addition to the existing lineup, this new product realizes even higher performance in terms of sharpness and wear resistance.

We hope you will take this opportunity to visit our booth.

- **TENRYU SAW MFG. CO., LTD.**

We produce mainly cutting tools using PCD, cemented carbide, cermet and other inserts.

In the automotive industry, PCD chip saws for Gigacast are attracting a lot of attention. Having robots with cutting machines increases the flexibility of the production line, but it also increases the risk of irregularities, such as tool breakage.

We are contributing to automation of production lines and reduction of chock stops by proposing breakage-resistant tools to our users.

At JIMTOF, we will exhibit our breakage-resistant PCD chip saws for aluminum

machining, which are highly evaluated by domestic and overseas EV manufacturers and EV component manufacturers.

## **10. Japan Optical Measuring Instruments Manufacturers Association (JOMA)**

In the past, inspections and analyses were generally conducted in dedicated facilities, but more delivery time, yield and stringent quality requirements are now requiring production with constant analysis in close proximity to the production line. In addition, with a declining workforce in Japan, efforts to improve productivity are expected to accelerate further. There is a trend toward sustainable business growth even with reduced manpower. Furthermore, there is a trend to sustain business growth even with labor savings, and optical measurement, which can acquire large amounts of data at high speed, is expected to be an effective means of supporting such production activities.

On the other hand, with the expansion of demand for electrification of automobiles, the development of power semiconductors, and the evolution of advanced packaging technologies such as chips for generation AI, the applications of measurement and inspection are diversifying, and the development and proposal of solutions for them are extremely important issues for our industry. Although we are still in the process of working on this, we will be exhibiting our latest measurement, inspection and analysis solutions, so please stop by the booths of our member companies.

### **<Company Specific Product Highlights>**

#### **● EVIDENT Corporation**

EVIDENT CORPORATION is a company created by the spin-off of the scientific business of Evident Inc. in April 2022, and is exhibiting the following inspection and measurement solutions at JIMTOF2024.

#### **• The 3D Measurement Laser Microscope LEXT OLS5100**

This laser microscope is capable of acquiring compelling 3D data at unprecedented speed. All components are designed exclusively for LEXT to capture the true shape of any surface. The roughness measurement function of the OLS5100 conforms to ISO and JIS standards and enables non-contact, high-speed roughness

measurement.

- **Handheld X-ray Fluorescence Analyzer Vanta Series**

Easily transportable to the measurement site, the Vanta series can quickly and accurately obtain analysis results on the spot, regardless of the shape or size of the object. The "VANTA" series is effective in applications such as component element analysis, steel grade determination, hazardous substance surveys, and plating thickness measurement.

- **Industrial Video Scopes IPLEX Series**

In addition to basic performance such as high quality observation images and high durability, we plan to exhibit 3D measurement and an ultra-fine model with a diameter of 2.2 mm. Contributes to more efficient internal inspection of tighter gaps and smaller parts.

- **Ultrasonic Flaw Detector Omni Scan**

Covers a wide variety of phased array tools. Powerful software and simple workflow help achieve high productivity.

- **Kosaka Laboratory LTD.**

We propose to improve measurement workability at measurement - quality control - production sites.

- **New Products Nano Texture NT Series Contact-type Film Thickness and Step Measuring Instrument**

The fastest measurement tact time in the industry! New software optimized for automatic measurement of film thickness and step measurement

- **New product: SE500Pro roughness tester for on-site use**

2 steps from measurement to judgment

- **Latest Portable Roughness Tester Smart Surf**

World's first Bluetooth communication for improved workability

- **The latest VECTORON arm-type CMM \*Maximum operating area of 3,500 mm**

The latest arm-type CMM (portable CMM) for easy CAD comparisons of various objects, large and small

- **CHUO PRECISION INDUSTRIAL CO., LTD.**

CHUO PRECISION INDUSTRIAL CO., LTD. is planning to exhibit our own brand of machine tool microscopes, “Tool Scope,” as well as optical measuring instruments that measure with high precision, and mechanical stage systems that incorporate advanced positioning mechanisms.

- **Workpiece Surface Non-Uniformity Measurement System**

Combining multi-directional illumination technology and telecentric optics, the reflected light from the workpiece surface is accurately captured by the device and applied to inspection of vibrations, which until now was considered impossible to visualize.

- **Further Expansion of High Accuracy and Low Price Motorized Stages**

We have added a new motorized stage series to our high-grade stage series incorporating our unique guide system “HG-VCR,” which is designed for high accuracy, high rigidity, and high load capacity, to achieve even higher accuracy and lower cost.

- **Laser Autocollimator LAC-SA**

The Laser Autocollimator LAC-SA measures angular displacement (yawing and pitching). Compared to conventional autocollimators, the LAC-SA is compact and lightweight and uses an LD light source in the visible range, making the optical axis visible and making initial setup very easy.

- **Nikon Corporation/ Nikon Solutions Co., Ltd.**



Nikon will exhibit a number of measuring and inspection systems and other equipment that utilize Nikon's optical and precision technologies, and introduce solutions that contribute to higher quality products. We look forward to seeing you at our booth.

- Actual exhibition of an automatic transfer system combined with a robot - Image measurement system NEXIV
- Demonstration of various measurement functions (shape evaluation, surface profile, etc.) using the large NEXIV
- The latest multifunctional X-ray CT inspection system
- Demonstration of automated particle inspection using an industrial stereo microscope + digital microscope camera + automated stage
- Demonstration of semi-automatic measurement using a measuring microscope
- Metal 3D Printer & Laser Removal Machine – Exhibiting sample of fabrication
- Introduction of new products for in-line 3D imaging, LuFact
- Introduction of products under development

● **EISEN CO., LTD.**

EIZEN CO., LTD. is a manufacturer of pin gauges, screw gauges, and hardness tester indenters. We offer ceramic and tungsten carbide gauges for customers troubled by wear and tear.

We will also exhibit diamond tools for machining brittle materials such as ceramics, which have been attracting attention in recent years, and propose highly efficient machining of silicon carbide and quartz glass.

● **Adcole LLC / Adcole Far East Co.,ltd**

Adcole LLC will be exhibiting the following products under the theme “Proposal for

Differences in Contact and Non-Contact Measurement.”

- Non-contact automatic shaft shape measuring machine (EV, automotive industry, aviation industry)  
Demonstration introduction of the OptiShaft series S100/08 type
- Video introduction of non-contact shaft measurement in conjunction with a robot for production lines
- Demonstration of the new camshaft measuring machine type 911-24 “B and the new NextGen software

- **OTSUKA OPTICS CO., LTD.**

Various types of visual inspection equipment, mainly LED illuminated magnifiers, will be exhibited.

< Items to be Exhibited >

- **LED Illumination Magnifier Magnalight Series**  
Mainstay products combining large diameter lenses and high color rendering LEDs
- **OLED illuminated magnifiers OLIGHT6 series**  
Next-generation magnifiers that use OLED as the light source, effective in reducing fatigue.
- **LED coaxial illumination magnifier Surflight SL120**  
The world's only coaxial illumination magnifier dedicated to 2x magnification at an affordable price.

- **CORETECH Co., Ltd.**

We will exhibit the standard 5m high, medium size, medium size skeleton, and small size of the “Robopole” (patent registered) electric screw type multi-stage telescopic

telescopic pole.

Please take a look at the single axis actuator telescopic pole with servo motor.

ROBOPOL” and calipers longer than 2m are unique products. We will design and manufacture them exclusively according to your company's requirements and specifications.

In addition, linear encoders, rotary encoders, battery-powered position measuring indicators, long calipers, and digital tape measures (10m) from Ergo, Bogen, and Presigica will also be exhibited.

- **Three R Solution Corp. Japan**

3R Solution Corp Japan sells inspection equipment that anyone can easily use.

For visual inspection equipment, we can offer microscopes with liquid lenses and the PictSizer3D, which enables 3D measurement, and for internal inspection equipment, we can offer endoscopes that enable measurement and other visual inspection equipment at affordable prices.

We will also exhibit other new products, so please stop by our booth.

- **Nippon Vision Engineering Co., Ltd.**

With its excellent ergonomic optical technology, Nippon Vision Engineering Co., Ltd. provides a range of products from user-friendly stereomicroscopes to the latest digital microscopes and high precision non-contact optical measuring systems.

At JIMTOF2024, we are exhibiting various products so that you can experience our patented eyepiece-less optics technology that offers unparalleled, high quality, 3D images and the next generation measuring software that offers high-resolution image measuring capabilities as follows:

- Industrial Lighting Magnifiers: Vision Magnifiers
- 3D Viewers: OPTA / Mantis

- Stereo Dynascope: Lynx EVO
- Digital Microscopes: EVO CAM II / EVO CAM ICON
- Optical & Image Dimensioning Systems: Swift Pro Duo / Swift Pro Edge

- **Polytec Japan**

Polytec Japan was established in 2004 as a Japanese subsidiary of Polytec GmbH, a German company. Polytec has been developing and manufacturing optical measuring instruments for many years since the 1970's. Currently, our main products are optical interferometers, which are used by our customers all over the world.

Among them, we will exhibit the following two models from the TopMap series, which are surface profilometers using white light interferometry.

- **TopMap Micro.View**

TopMap Micro.View is an easy-to-operate, compact tabletop optical profilometer. It is a microscope-type instrument with excellent cost performance that can be used to inspect microstructures and surface roughness designed with high precision.

Despite the extremely deep measurement range of 100 mm in the Z direction, the focus finder function makes it possible to find the focal point easily and quickly.

- **TopMap Pro.Surf**

TopMap Pro.Surf employs telecentric optics to provide a wide measuring field of view of 44 x 33 mm, which is unprecedented for an optical shape measuring instrument using a white light interferometer. Furthermore, the measurement area can be expanded up to 230 x 220 mm by using the stitching function and combining measurement data.

Depth in the Z direction can also be measured up to 70 mm, enabling measurement of sizes that were previously difficult to accommodate with white interferometers.

TopMap Pro.Surf features short measurement time due to its wide measuring range and highly accurate height measurement with a white interferometer.

- **MITAKA KOHKI CO., LTD.**

MITAKA KOHKI CO., LTD. will exhibit on the theme of measurement automation, including improved measurement speed and linkage with robots, as well as enhanced measurement support functions. We will also introduce wafer thickness measuring machines as a proposal for the rapidly growing semiconductor-related field.

- **New Non-contact 3D Measuring Instrument NH-3Ns (NEW)**

Improvement of the best-selling NH series point auto-focus method measuring machines.

AF motor is changed to DD motor for quietness and speed improvement.

New measuring screen. Smooth operability is realized.

- **Non-contact Surface Property Measuring Instrument PF-60**

AI function, combined with transfer robot, detects scratch depth

High pixel camera for observation

- **Non-contact all-round 3D measuring system MLP-3**

Automatic measurement of rotary tools

Ultra-compact camera makes it easy to identify observation points

- **Wafer inspection system WT**

Measurement of wafer thickness, warpage, etc.

It can be combined with a conveyor machine.

## 11. Japan Fluid Power Association (JFPA)

Japan Fluid Power Association (JFPA) consists of 120 member companies (58 regular member companies and 62 associate member companies), which manufacture and sell pneumatic, hydraulic and water pressure equipment as well as related equipment. The association works on various types of projects aimed at the revitalization and development of this industry.

At JIMTOF2024, 16 member companies of the Association (55 booths) will exhibit and demonstrate the latest technologies and products for a sustainable society based on the concepts of “manpower saving,” “labor saving,” “carbon free,” “safety,” “cleanliness,” etc. We hope to contribute to the development of the industry by widely publicizing and promoting various types of hydraulic and pneumatic equipment and related products that meet user needs, as well as machine oil, cutting oil, and lubricating oil used in various types of industrial equipment.

<Company Exhibitor Names> (according to the Japanese syllabary)

Azbil TA Co., Ltd.

idemitsu kosan company ltd.

ASK CORPORATION

SMC Corporation

ENEOS Corporation

SAKAGAMI SEISAKUSHO LTD. (New)

CKD CORPORATION

Showa Corporation

Sumitomo Precision Products, CO., LTD.

DAIKIN INDUSTRIES, LTD.

TAISEI KOGYO Co., Ltd.

Triple R Co., Ltd.

Nitto Kohki Co., Ltd.

NIHON PISCO CO., LTD.

HYDAC CO., LTD.

MATSUI Corporation (New)

### <Machines and Equipment of the Association Members>

- Oil pressure equipment  
Oil pressure pumps/motors, oil pressure valves, oil pressure cylinders, accumulators, and oil pressure units, etc.
- Oil-pressure-related equipment  
Oil pressure presses, oil pressure coupling, oil tuners, filters, and lubricating devices, etc.
- Air pressure equipment  
Air pressure valves, air pressure cylinders, actuators and air pressure systems, etc.
- Air-pressure-related equipment  
Compressors, air-cooling devices, air pressure coupling, and tubes, etc.
- Water pressure equipment  
Water pressure valves, water pressure pumps, water pressure cylinders, water pressure coupling, and tubes, etc.
- Others  
Hydraulic oils, cutting oils, oscillating surface oils, and lubricating oils, etc.

## **12. Japan Testing Machinery Association (JTM)**

Japan Testing Machinery Association (JTM) was originally founded in 1940 and launched as the “National Testing Machine Industrial Association” consisting of a league of 14 major manufacturers of representative material testing equipment at the time.

The organization was reformed in 1948 after the turmoil and chaos of the Second World War. Since then, it has made many major contributions to society by "testing and measurement" in the field of quality measurement, which is a particularly critical area.

Until the mid-1960s, JTM was comprised mainly of material test equipment manufacturers. With the growth of the domestic electronic industry, however, environmental test machine manufacturers began to participate in JTM with the spread of environmental test techniques known to be effective in making reliability tests, in particular, of electronic products. This trend helped form the current state of JTM, and it came to represent companies across Japan involved with industrial test devices related to test factors such as force, hardness, pressure, heat, temperature, humidity, and wear, etc. This organization is a coalition of 72 companies (66 member companies and 6 supporting companies) possessing numerous, test related business information spanning a wide variety of fields and topics. Japan Testing Machinery Association continually strives to earn the trust of society by producing testing machinery through an organization of specialists in test machine manufacturing.

### **<Products on Exhibit>**

- **YAMAMOTO SCIENTIFIC TOOL LABORATORY, CO., LTD.**

- **JIS/ISO compliant high precision hardness reference piece**

It is the block for the hardness test based on JIS and ISO high-precision hardness standards and used for verifying industrial hardness testers. We produce about 150 types of such blocks. We pursue zero variation in hardness, and have earned a high



reputation and trust both domestically and internationally for (1) high uniformity, (2) stability, and (3) international and universal standard values.

➤ **Other standard tools**

• **Standard Microstructure**

This is a set of 170 microstructure samples made of metals and heat treatment materials divided into seven groups. These can be used for diverse purposes ranging from studying metal microstructure to acquiring etching techniques to visualizing local heterogeneity.

• **Standard Piece for a Spark Test**

This is a set of 45 representative JIS steel materials divided into four groups for the spark test for steel. It is effective for comparing, cross-checking, and assessing against unknown test materials. It is useful for education and training as well.

• **"Hardnester"**

This is a tool to measure the hardness of the metal by pressing it against the object. It can measure complex-shaped materials as well as large samples simply and quickly.

• **Charpy Impact Standard Specimen**

- High-precision standard specimen for indirect verification of Charpy impact testers, in accordance with JIS standard. You can choose from three levels: "30J", "100J" and "160J".

● **SIGMA ELECTRONICS Co., Ltd.**

➤ **Field Balancer SB-7707RB, SB-8806RB**

Convenient functions have been added such as a function to reduce the troublesome adjustment of the correction weight and a pass/fail judgment function, making them even easier to use.

In addition, the CCLD sensor can now be used, making it less susceptible to noise even in environments where the cable is prone to shaking.

➤ **Horizontal Balancing Tester SSB-6001A**

The SSB-6001A can efficiently perform precise balancing of rotors weighing 1 kg or less.

The vibration sensor uses an optical non-contact displacement sensor, which is unaffected by magnetism even if the rotor to be tested is ferromagnetic.

- **NAGAHAMA SEISAKUSHO LTD.**

- **Horizontal soft bearing balancing machine With protective cover**

Model H2B (Measuring circuit MMi-1000 type)

Ideal for precision balancing of rotors weighing 40 kg or less.

Equipped with a newly developed measuring circuit, it has improved operability and accessory functions.

This is a versatile type and can be used for a wide variety of rotors.

Rotors with built-in bearings can also be measured by manufacturing dedicated attachments.

Protective covers are installed to improve operator safety.

- **SCHENCK balancing machine Pasio700**

Model Pasio700 (measuring circuit SCHENCK-ONE)

A balancing machine with a protective cover, planned and designed by our partner company SCHENCK based on a new concept.

The objective of the concept was globalization, pursuing specifications that would be acceptable in any country through worldwide marketing by the Group's network in each country.

The measurement circuit has been completely redesigned and can be connected to a network for remote support in case of trouble.

- **Unipulse Corporation /ROBOTEC Inc.**

The “Moon lifter” for easy lifting and precise positioning of heavy objects, the world's highest level rotary torque meter “UTMIII”, the non-contact thickness meter “UMA-500-C” for easy and accurate thickness measurement, and the electric torque actuator “UNISERVO” for controlling output torque with actual torque measurement will be exhibited.

Moon lifter is an airless and hydraulic-free electric balancer. It detects force and assists lifting, so it can lift heavy objects up to 2 tons and position them as if it were a manual operation. Also on display are a number of application examples, such as cooperative operation to increase the payload capacity of robots, and the Jib Moon, which can insert heavy objects into deep locations.

UTMIII achieves the world's highest level of performance with a full range of features, including compactness, light weight, high accuracy, high responsiveness,

durability, and non-contact.

UMA-500-C is a convenient non-contact thickness gauge that can measure thickness in micron order even with rough positioning by combining overcurrent and capacitance methods.

"UNISERVO" is a robot actuator with built-in torque servo functionality. By directly measuring the torque of the output shaft, "UNISERVO" achieves unprecedented fine control.

### **13. Japan Gear Manufacturers' Association (JGMA)**

Japan Gear Manufacturers Association (JGMA) consists of 119 member companies (87 member companies and 32 supporting members). The businesses of member companies are the manufacturing and sales (Japan and abroad) of gears and gearing. JGMA implements various activities with the goal of contributing to the industry's development. We are currently focusing on three major projects: the education project to nurture future generations; the standards project to establish, revise, and internationalize standards; and the international exchange project to promote overseas inspection tours and exchanges.

Four member companies are making a presentation at JIMTOF2024. In their exhibits, you can see the latest technologies concerning gears, gearing, gear measuring instruments and gear tools. Please visit each exhibit to check the wide range of products made by advanced technologies and manufacturing technologies.

#### **<List of Exhibitors>**

- **KYOUIKU GEAR MFG.CO., LTD.**

《Exhibited products》

Small precision gears, small gear boxes, and wave gear reducers

《Highlights》

[Announcement of the new catalog, KG STOCK GEARS KG5001]

The latest issue of the KG Catalog! Revised page layout,

Easier to read, easier to use.

[Exhibition of Main Drive's Wave Gear Reduction Gear Series]

High performance wave reduction gears made in Taiwan have arrived in Japan!

High-precision manufacturing, reliable quality assurance, and diverse and quick customization.

The engineers from the manufacturer are waiting for your questions.

- **KOHARA GEAR INDUSTRY CO., LTD.**

《Exhibited products》

KHK standard gear and rack & pinion lubrication systems

《Highlights》

Our new general catalog, "KHK2025" is published!

Gears for a variety of applications are available. Expanded product lineup to include laser hardened racks, standard add-ons, hardened plastics, and semi-custom standard gears.

[Additional standardized work] Machining content is standardized according to the gear fastening parts (E, F, J, and R series) [Hardening Plus] Standard gears you order are delivered with high-frequency hardening on the tooth flanks [Semi-custom Standard Gears] Large gears are standardized. Standardization of large gears for more efficient design and selection, and quick delivery.

- **DTR CORPORATION**

《Exhibited products》

Hob cutters, pinion cutters, broach cutters, surface broach cutters, master gears, power skiving cutters, carbide tools, HSS tools, drills, end mills, special tools, coating equipment manufacturing and sales (PVD), and other machine tools are being exhibited.

《Highlights》

Our products are highly evaluated all over the world, including Japan, the U.S., Europe, China, and Asia. We have automated systems in place from order to delivery to ensure high quality, quick delivery, and cost performance.

DTR Corporation is making every effort to meet various needs in this era of change and innovation by offering high-quality products, new technologies, total services, and environmentally friendly business opportunities.

- **Tokyo Technical Instruments Inc.**

《Exhibited products》

CNC Gear Testing Machine / Roughness Tester for Gears

《Highlights》

As for CNC gear testing machines, we plan to exhibit new gear testing machines that meet the needs of our customers.

In response to the recent trend toward EVs in automobiles, we have completed the development of a gear tooth surface roughness tester that meets customer needs based on feedback from customers who have actually purchased our gear testing machines.