

2025 COMPANY PROFILE

**SPECIAL PROJECTS
AND AUTOMATION
APPLICATIONS**



What is the Purpose of Establishment of BMS Bilginođlu Makine?

BMS Bilginođlu Makine was established in order to respond to the demands of companies in the sector for special measurement solutions. Companies demand project-based turnkey measuring devices and want to facilitate the integration processes of these devices. However, the lack of sufficient knowledge about the features of the automation products we sell and the deficiencies encountered in the applications sometimes cause problems.



With the impact of Industry 4.0, companies are focusing more on inline automation, communication and data management. However, existing measuring devices are insufficient to meet these new needs. In this period of increasing expectations for precision and speed in measurement, the demands for on-site measurement and early warning systems are also increasing. Companies are working to eliminate operator and measurement errors and need more reliable and efficient measurement solutions in this direction.

As BMS Bilginođlu Makine, we are working to meet these demands and to offer high-precision and fast solutions tailored to the needs of companies in the sector.

Activities;

- Revising existing measuring instruments according to the part to be measured.
- Part-specific designs using standard measuring tools.
- Recording the measurement data of the measuring devices and communicating with the workbench according to the measurement results (offset).
- Adaptation of standard devices to the automation system (robot, etc.).
- Modification of standard measuring equipment according to your requirements.
- Fully automatic (operator-independent) measuring systems.
- Measurement system adaptation for robotic cells.
- Storage of measurement results and integration of Statistical Process Control (SPC) systems.
- Control (SPC) applications.
- Communication with the machine and automatic delivery of tool wear compensation according to the measurement results.
- Software enhancements with personalized user interfaces.

BMS Bilginođlu Makine Has Been Serving Its Customers Since 2013!

Reasons for Companies to Prefer BMS Bilginođlu Makine!

- Our group company Bilginođlu Endüstri A.Ş. offers quality control device, automation, complete solutions due to the fact that it is the distributor of MITUTOYO in Turkey.
- Our experience in measuring instruments and metrology.
- Company awareness as Bilginođlu Group.
- We are accessible with our active personnel in the field, including BEM and BDM.
- Being the representative of the products we sell and getting the necessary technical support from the manufacturer.
- We can use our offices in Bursa, Izmir, Ankara and Istanbul.
- We are able to offer a complete solution including measuring device, automation system, SPC software, machine communication and special software.
- We are able to present visual materials at the proposal and presentation stage.
- In this regard, we have 2 SolidWorks licenses to use in design and production processes.

SPECIAL PROJECTS AND AUTOMATION APPLICATIONS

Mitutoyo



Mitutoyo Smart Factory Cell

To emphasize Mitutoyo's competence in IoT, Industry 4.0 and automation; Mitutoyo has developed a Mitutoyo Smart Factory Cell in collaboration with KOMEK and FANUC. The Mitutoyo Smart Factory Cell is a state-of-the-art combination of modern industrial equipment that implements four different measurement technologies and an inspection system.

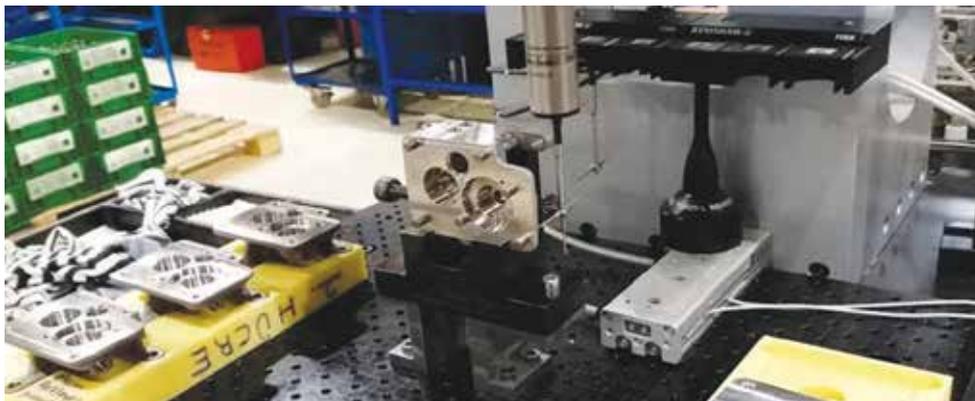
3D CMM, FIXTURES ACCORDING TO YOUR WORKPIECES ON THE CMM

As a general-purpose measuring machine, the CMM can perform almost any measurement task without much assistance thanks to its advanced probing configurations. However, there are also situations where it is necessary to make use of special fixtures in order to optimally position and secure parts for measurement. Commonly, they are fixtures in which multiple parts are measured in a cycle, allowing the operator to quickly load and secure all parts at the same time. This practice will maximize productivity and efficiency.



KO-GA-ME Probe Exchange System

It is now possible to use different probe configurations with Mitutoyo's In-line CMM KO-GA-ME, which has a small measurement volume. By bringing the probe changing magazine closer to the machine at the time of change by means of a pneumatic system, we keep it out of the machine volume at the time of measurement.





3D CMM, LOADING SYSTEMS FOR CMMS

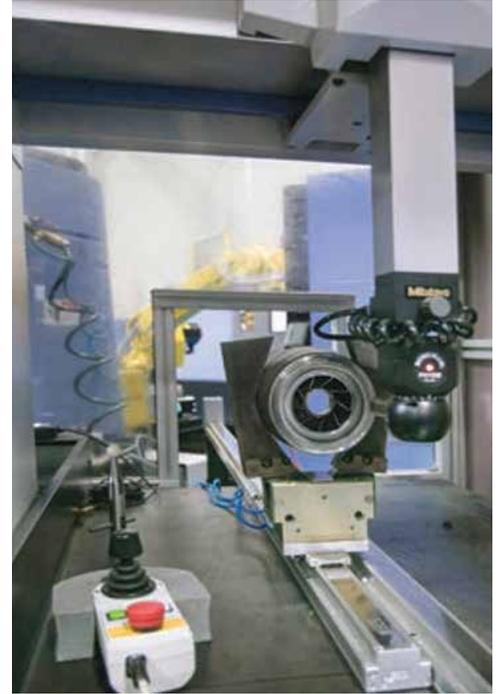


Whether size, weight, or a large number of parts require a custom loading system, we simplify loading and unloading parts on the CMM.

BMS Bilginoğlu Makine's loading systems It is comprehensively designed and developed down to the smallest detail to ensure maximum efficiency and reliability, giving you unlimited offers a number of solutions.

In addition, by the experts of BMS Bilginoğlu Makine the number of similar situations encountered, It means reaching the best solution and getting the selected system up and running as fast as possible.

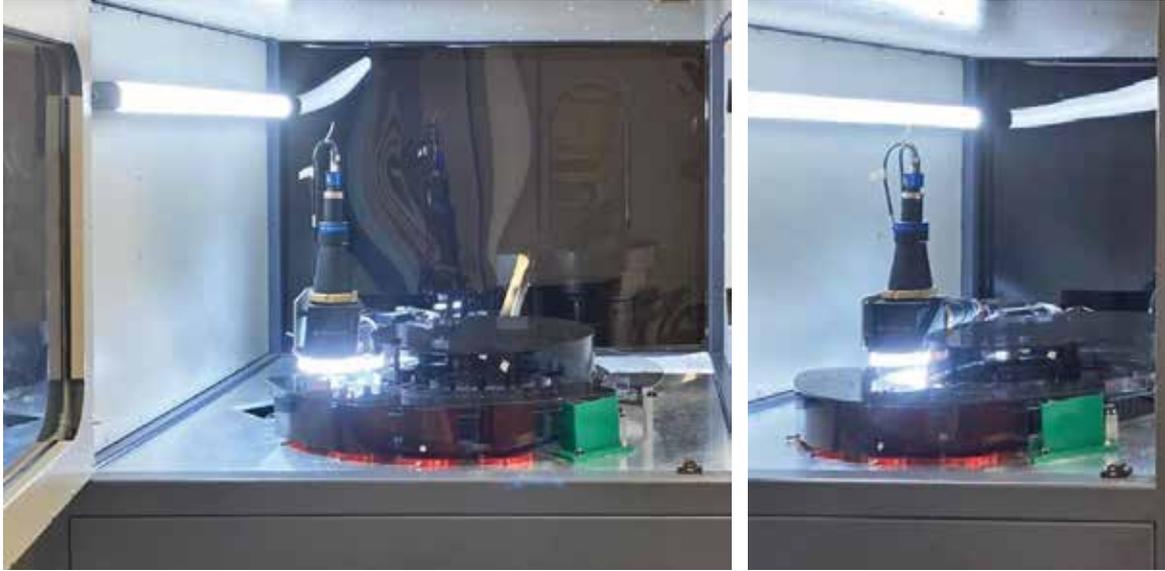
3D CMM, LOADING SYSTEMS FOR CMMS



3D CMM Robot Application

Thanks to our 3D CMM solutions we provide in the production environment where robotic cells are used, we enable the establishment of a full closed-loop manufacturing system. In the measurements we make with the 3D CMM, we not only separate the suitable or unsuitable parts, but also send tool wear compensation to the production bench, preventing the production of faulty parts caused by tool wear.

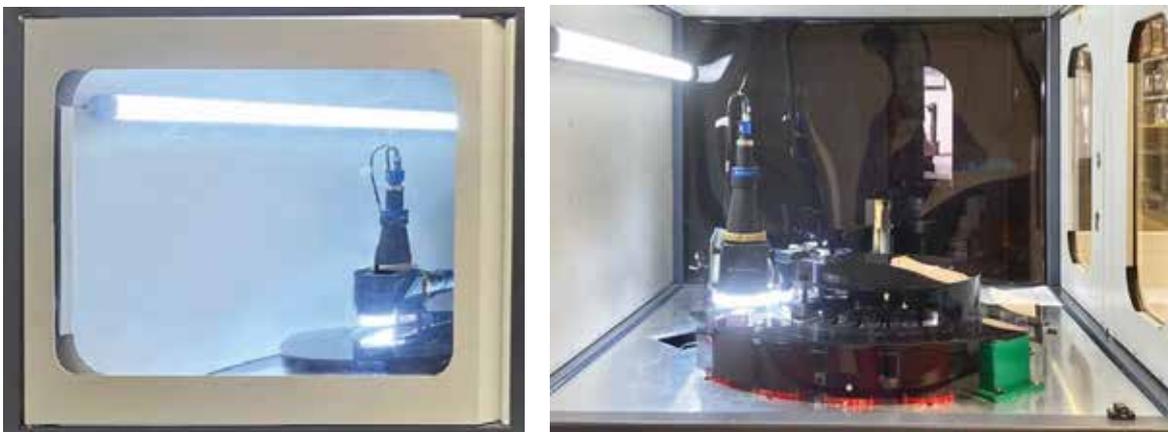
We produce turnkey projects completely in line with your demands. As BMS Bilginođlu Makine, with our experienced team and experience from the past, we carry out all processes from the project design stage to the production, assembly, installation and training stages, and offer the measuring device you need directly to your use.



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Vision Measurement System (Measurement and classification systems)

With the automatic sorting device, we automatically sort the parts, perform the necessary measurements with the camera, and direct the suitable parts and the unsuitable parts to separate sections.



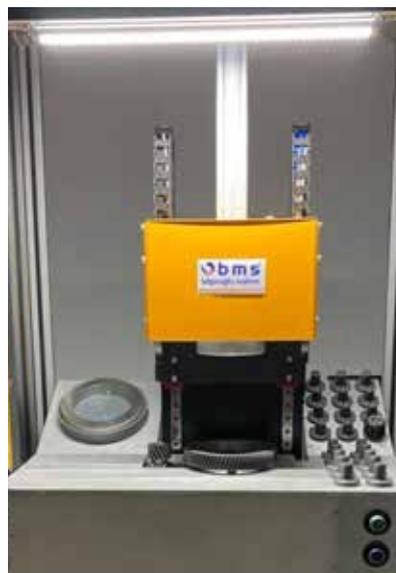


Special Depth Measurement System

Mitutoyo Depth measurement system for cans with comparator and special connection system.

Flatness Measuring Device A

special flatness measuring device that provides repeatability with high precision, working with 50 linear probes and BMSOFT software.



Gear Measuring Device



Multifunctional Measuring Device

According to customer demand, elements such as diameter, length, circularity on a cylindrical part are measured with cameras by rotating the part

FIXTURES FOR SURFACE ROUGHNESS, OVALITY GAUGE AND CONTOUR MEASURING DEVICES

With form measuring devices, the measurement of the forms on the part can be done very precisely. However, the parts to be measured may need special clamping fixtures depending on their geometric form. At this point, BMS Bilginoğlu Makine designs and manufactures fixtures that increase efficiency and versatility for you.

Piston Measuring Fixture For Ovality Measuring Instruments

Fixing the pistons to the ovality measuring device is one of the applications that require special fixtures. In this regard, we have developed the solution that provides fixing in the most practical way.

Anti-Vibration Table for Form Measuring Devices

Form measuring devices require a vibration-free environment when performing micron-precise measurements. We offer the best solution for you to isolate form measuring devices from sources that generate vibration outside.



Form Controller:
This device performs form checks of spherical parts using the Mitutoyo Comparator.

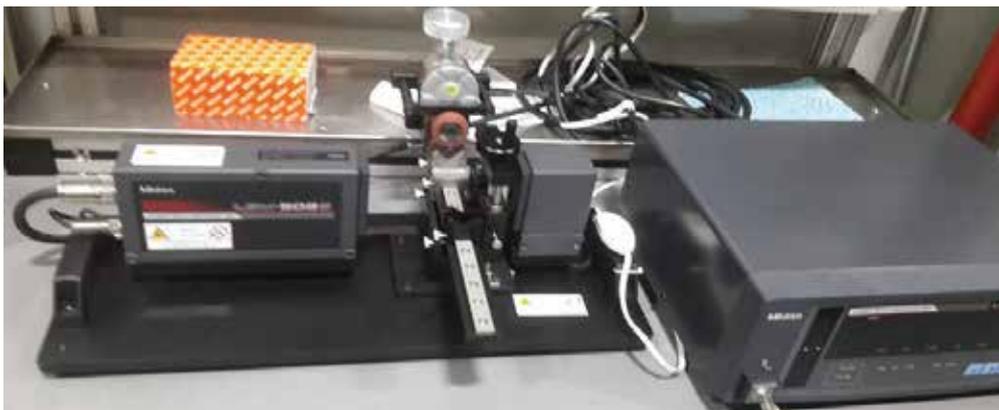
..... SPECIAL MEASURING FIXTURES FOR LASER SCANNING MICROMETERS

Positioning is the key to a laser diameter measurement system. BMS Bilginoglu Makine has extensive experience in maximizing the performance of laser micrometer. In the fixture, if the part needs to be shifted or rotated during the measurement cycle, the positioning accuracy of the part is vital for maximum measurement accuracy.



LSM 503S Cutting Tool Diameter Runout Measurement System

Cylindrical cutting tools are rotated automatically by means of a motor and the diameter and runout of the cutting tool are measured with a Laser Scanning Micrometer.



SPECIAL SOLUTIONS FOR SMALL MEASURING INSTRUMENTS

The performance of small gauges can be significantly improved by carefully thought-out fixture design to enable them to be applied to a wide range of measurement types. BMS Bilginoğlu Makine has designed and delivered numerous examples of fixtures that enable these basic devices to perform measurement tasks far beyond the limits of traditional use.



Special Spherical Jaw Caliper

For the Automotive Industry, the tire surface of the wheels is used to measure the thickness of the palate.



Special Cylinder Jaw Caliper

Specially designed for the customer, this cylinder jaw caliper is used for tire surface width measurement on rims.



Special Cylinder Jaw Caliper

Example of caliper with specially prepared jaws for customer special measurement demands on wind vane blades.



Special Micrometer for Aviation

Industry It is designed and manufactured for the measurement of a hard-to-reach area with customer demand in the aviation industry.



For the Medical Industry

Special Tip Caliper: A special caliper prepared for the measurement of implants used in the health sector.

We design and manufacture special machines for dimensional measurement. As BMS Bilginođlu Makine, we share with you our experience in many different sectors.



Special Diameter Measurement System

Precise inner and outer diameter measuring instruments developed using linear measuring probes that provide high precision repeatability.



Height Measurement System

Mitutoyo height measurement systems with precision aquaplaning system designed with linear rulers and indicators.



Diameter Measurement System

Precise outer diameter measurement systems for cylindrical parts.



Spline Measurement System

Measurement of the pin-top diameter (Mdk) is carried out on the production line of the spline gear. yapılmaktadır.



Rim Diameter and Height Measurement System

Specially designed machines that measure rim hub diameter and casting chip distance in production automation.



CMM & Robot Automation



Measurement results are reported instantly



After the measurements tool wear offset information is sent to the production machines.



Possibility of measurement in the production environment

CMM & Robot Automation Application and Advantages

We believe that in the near future, robots and automation will become widespread in the field of quality control as well as in the field of production, and such smart factory projects will increase. In this way, human errors will be eliminated and communication between measurement systems and production benches will be ensured.

BMOpt

Vision Measurement Systems

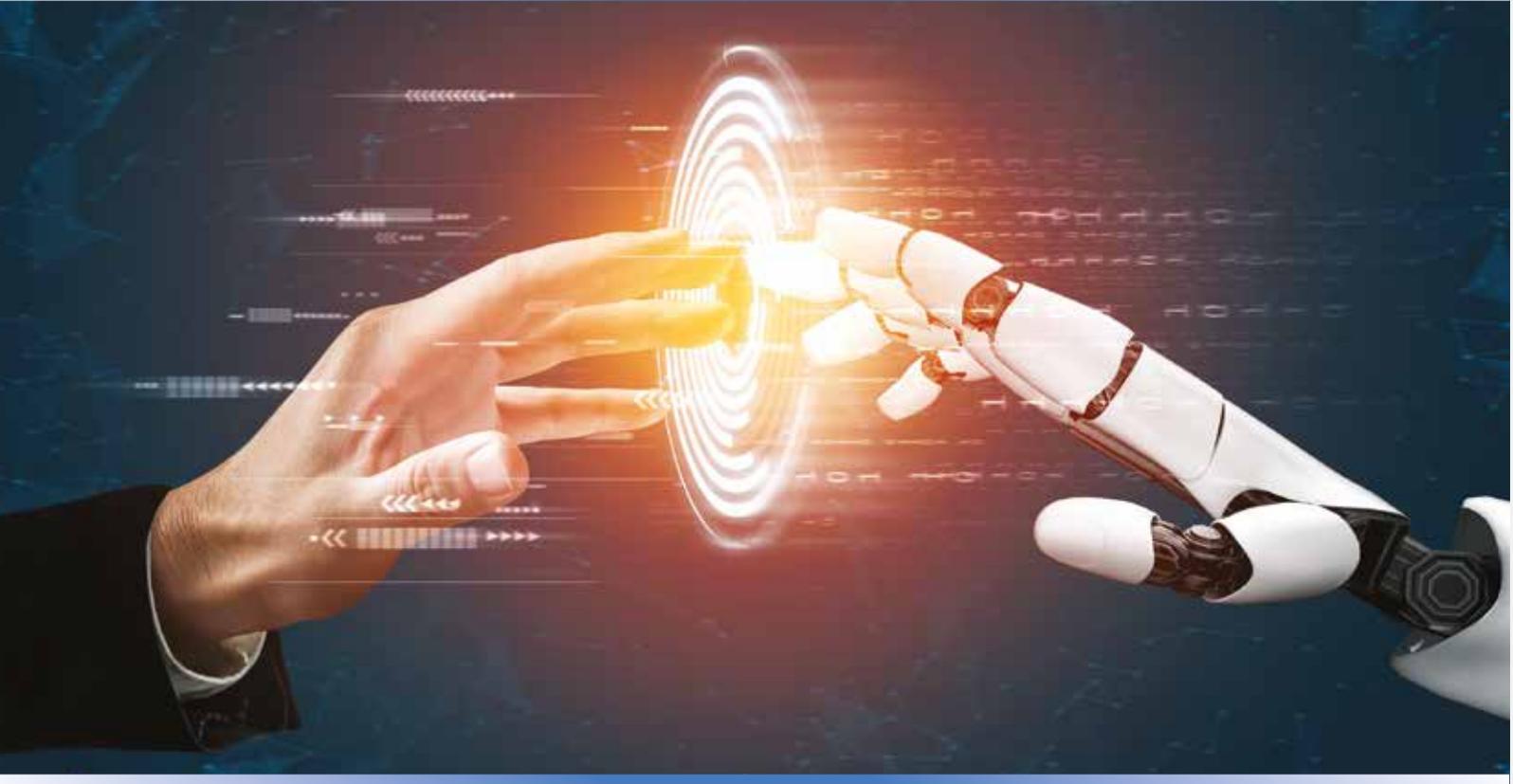
**FAST,
ACCURATE,
EASY AND
PRECISE
MEASUREMENTS**



BMOpt is a cameral optical measurement system that combines accuracy and precision with an easy-to-use operator interface. **BMOpt** has the most advanced, reliable software in the industry that captures a fragment in digital format and converts the captured image into life-size data. **BMOpt** allows users to measure all dimensions of a part with an accuracy of up to +/- 0.5 microns! Streamlining your control process will have an immediate impact on your bottom line. Combined with accuracy, and convenience, **BMOpt** will become the most valuable addition to the Quality Control Department!



SPECIAL PROJECTS AND AUTOMATION APPLICATIONS



We work together to develop a tailor-made measurement solution! Sometimes standard equipment is not sufficient for your specific measurement requirement. That's why, despite our extensive product portfolio, BMS Bilginođlu Makine also offers tailor-made measuring solutions that meet your exact needs, no matter how complex.

Our Activity Areas

- Modification of standard measuring equipment according to your requirements,
- Fully automatic (independent of the operator) measuring systems,
- Measurement system adaptation for robotic cells,
- Storage of measurement results and Statistical Process Control (SPC) applications,
- Automatic communication with the manufacturing bench / tool wear compensation according to the measurement results,
- Software enhancements with personalized user interfaces.

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