



How to Evaluate a Metrology Solution Partner to Optimize Your Investment

ZEISS Industrial Metrology



Think of Metrology as a Long-term Partnership

Look for a Comprehensive Solution Provider

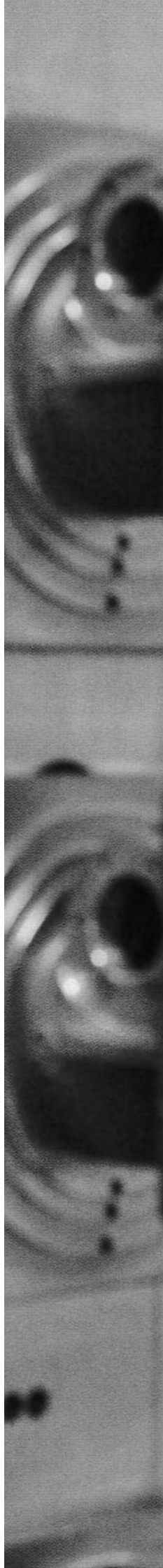
As a manufacturer, you build relationships with your customers and suppliers in order to enhance your business and maximize profitability. The same should be true for your metrology solution provider.

Keys to successful relationship

Your quality assurance program is integral to the success of your business. Your choice is about more than the measuring equipment alone.

A successful system establishes a relationship with an industrial metrology partner you can trust for the long-term. Look for these key attributes from your partner:

- Broad portfolio
- Scalable solutions
- Application expertise
- Software ease and consistency
- Equipment installation and training
- Customer service and support





Einflüsse auf das Messergebnis



1 µm

ALBERT

Equipment Built to Move Business Forward

Broad Portfolio

When your company is considering a new metrology system – transitioning from manual measurement or upgrading an existing system – it's critical to find a partner who offers a broad portfolio. Your initial cost is an important consideration, but true value comes from a solution that will scale, grow and adapt to your business needs.

Accuracy and precision within a broad portfolio

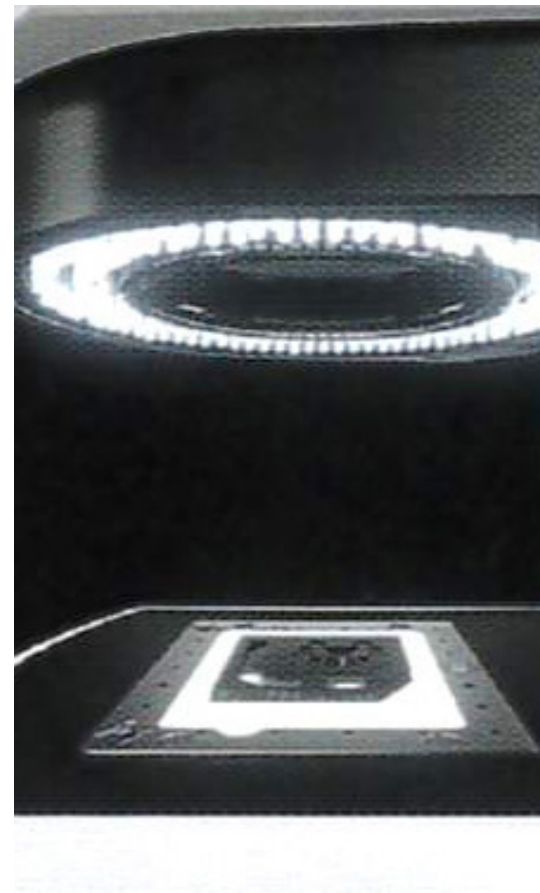
The strength of an industrial metrology solution is in the flexibility of the components you can select. Not all measurement approaches work for the materials, component size and speed you need for your operation.

Entry-level to sophisticated solutions

Look for a provider that offers a wide range of measurement equipment at multiple price points. You may need a variety of operations – from optical scanning to digital measuring projectors and multi-sensor measuring machines to bridge-type CMMs.

Flexibility

If the measurement you'll be doing is specific, limited and unlikely to change, then a single-function machine may be all you need. If your needs vary or change, the ability to support multiple technologies will be critical. Flexible systems can be useful and cost-effective.



Measurement Machines Ready for the Challenges of Tomorrow

Scalable Solutions

A flexible industrial metrology solution should meet your current application needs and have the ability to scale as your production capacity grows.

Understanding your needs

A clear evaluation of your current needs will help with your evaluation of a potential partner, but it's important to also consider your future needs. After-purchase upgrades can be far more costly than including features in your initial purchase that you'll need in the long-term.

Software across the platform

If every time you add a machine to your quality systems, you need a new software package, you'll have a learning curve, additional training and compatibility concerns. Consider a system where the software is used across a broad portfolio of measurement solutions so that it can grow with you.

Accuracy and reliability

Your provider must offer reliability and consistency in measurements over time, even as your capacity grows. Rapid fluctuations in demand are commonplace. Your measurement equipment must tackle heavy workloads and allow for easy upgrades throughout the product's life cycle. Your solution should provide repeatable results, even in complex manufacturing environments with vibrations as well as temperature and humidity fluctuations.

Accessories and fixtures

Often metrology equipment can be enhanced to improve speed and efficiency through adding accessories and/or fixtures. Look for a system that provides flexibility so that a single machine can be utilized for measurement on a variety of complex components.



A Partner to Find the Right Solution

Application Expertise

Modern manufacturing relies on consistency, and tolerances are tighter than they've ever been. You need a partner that understands the specific applications, materials and customer expectations that you face in your production environment to assist you in building your quality measurement capabilities.

Expert application implementation

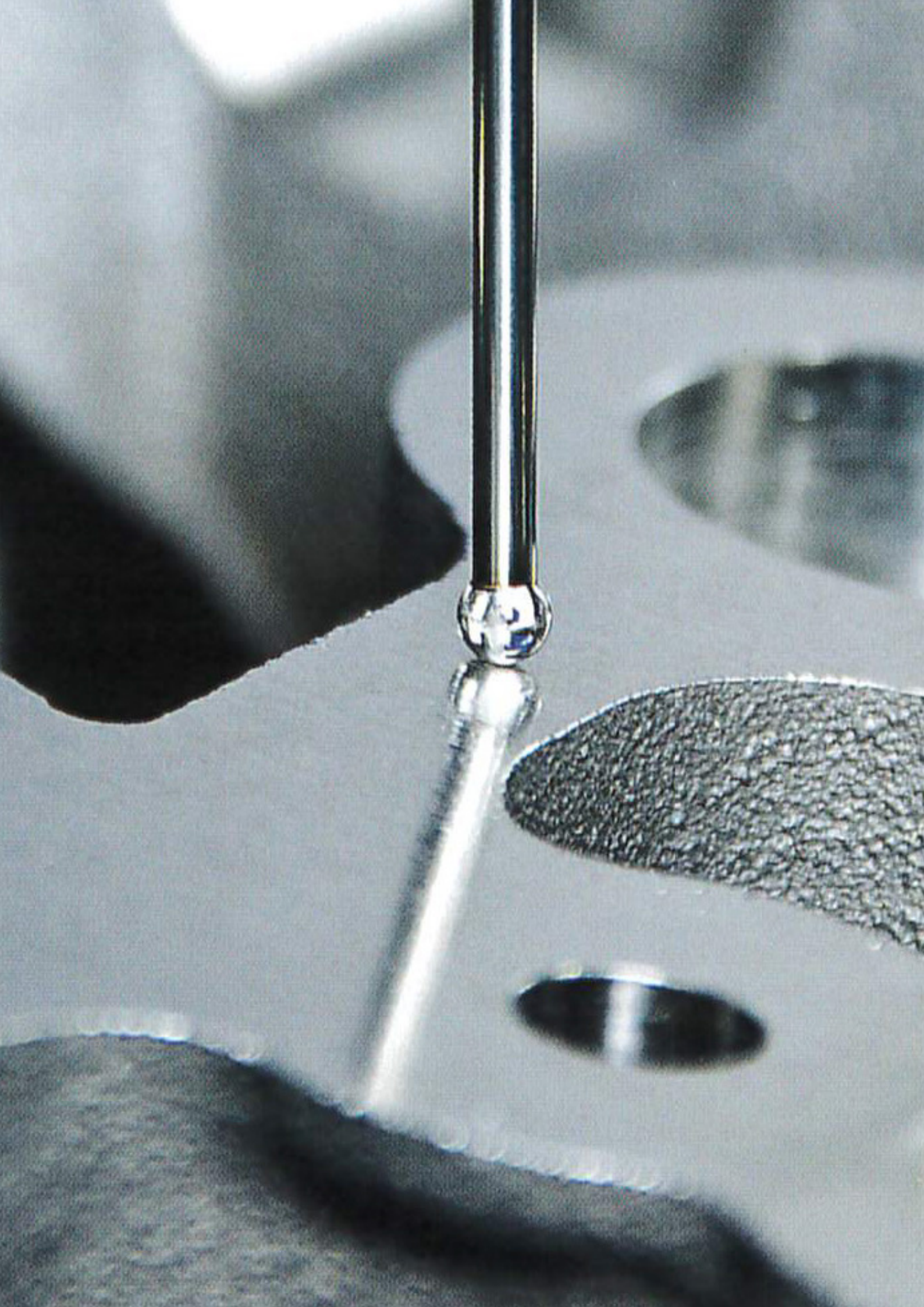
A metrology partner needs to listen to a client's needs and then help select and implement the appropriate solutions. Not all applications are the same, nor are all measurement strategies. A comprehensive provider should apply experience from your industry and similar component measurement to achieve your goals.

Experience and variety

Increasingly shorter component life-cycles and shorter development times put a strain on your team. With elaborate surface shapes and complex structures, you need an experienced team to give you answers about the best solutions and measurement processes to meet your needs.

The right measurement for the task

There are applications in which the most accurate tactile measurements won't be as effective as optical or laser measurement. Each has their strengths, but there are certain tasks that require only one of the two. Sometimes, the two complement one another to yield better data than one alone. Find a metrology partner with the experience to guide you.



Find the Answers You Need in Easy-to-Use Programming

Software Ease & Consistency

Imagine measuring software that returns exactly the information you want within the shortest possible time. It's not unreasonable to expect your metrology system to create reports that are easily understood by all levels of your team and that contain actionable insights.

Intuitive interfaces

Software that is complicated can make the simplest equipment unworkable. When looking for a metrology partner, look at the software that runs the equipment. Does it communicate with your design software or CAD? Look for a partner that offers software solutions that are easy to integrate, change and update.

Software supporting multiple systems

Your solution should manage the entire measurement process and serves as the operator interface. An ideal software package should manage both contact and optical measurement. Look for software that supports multi-sensor equipment and serves multiple systems in your production environment to satisfy multiple stakeholders.

Reporting and communication

A measuring machine can tell that a part is out of spec, but that's just a symptom and rarely provides enough information alone. A comprehensive metrology software platform should let your production or quality engineers identify trends for multiple parts to quickly diagnose the problem and help you develop a solution.

Accessibility and data sharing

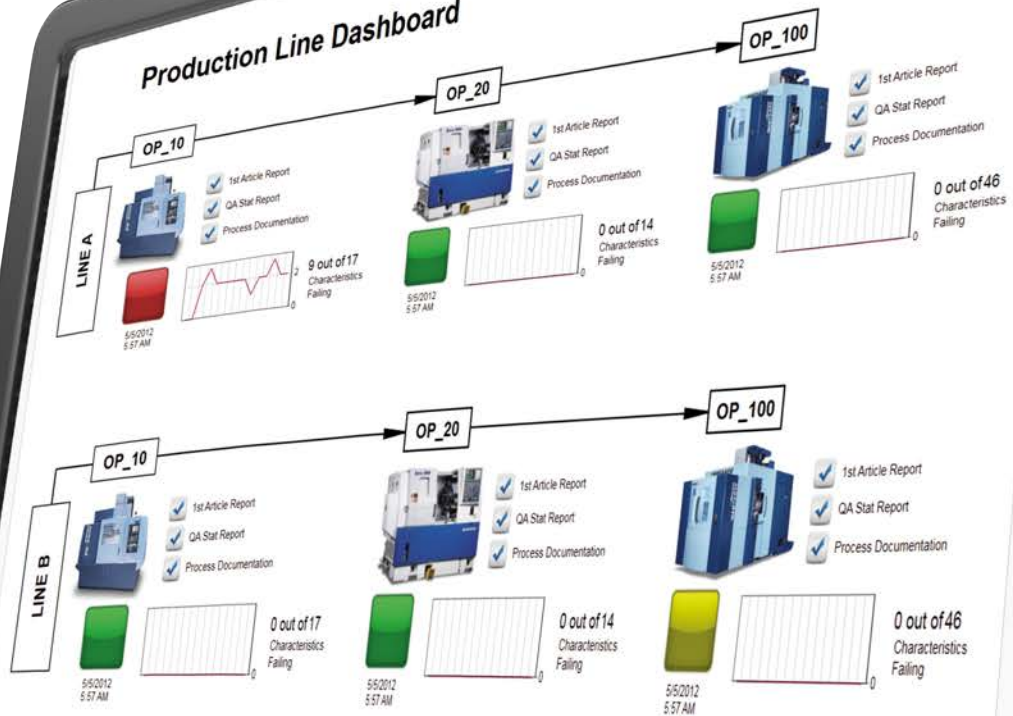
Traditionally, the quality department owns measurement data and handles all problems, large or small. However, reporting will be most effective when it can be shared across process engineering, quality control and management areas, rather than being sequestered within a limited area.

Data storage and management

A production system gathers a lot of data that will need to be stored for some time. As the volume grows, the challenge is being able to find exactly what you need quickly. Look for a solution that keeps storage and reporting systems efficient and enable you to purge what is no longer needed and compress what isn't needed now.



Production Line Dashboard



Building Your Metrology Capabilities

Equipment Installation & Training

Training tailored to your system

Demand that you receive hands-on, multi-day software training courses after installation get your team up and running quickly. Proper training that is specific and customized to your machine, your exact sensor configuration, and your applications can deliver the greatest return on your investment.

Filling the skills gap

Find a metrology partner committed to education and training for your team. Manufacturers have identified a lack of skilled workers as a risk factor for the future of their business. Increase your quality management capabilities.

Basic, intermediate and advanced options

A true metrology partner can also provide opportunities for growth for your team with tiered training programs. Classes that build and help you grow your internal quality assurance expertise can help you maximize the positive impact on your business.

Optimum use of your equipment

The result of quality training and education is that your business is able to maximize your investment in the measuring system. With a highly-trained team, you are able to utilize best practices, avoid errors and optimize efficiencies.



ZEISS training locations

- Maple Grove, Minnesota
- Brighton, Michigan
- Irvine, California
- Fremont, California
- Rowlett, Texas
- Sudbury, Massachusetts
- Fishers, Indiana

It Doesn't End with the Sale

Customer Service & Support

Your measuring systems work hard, day in and day out. That's why you need long-term customer service to ensure reliability and optimal performance.

Calibration service

Your success depends on making sure your measuring machine accuracy is sustainable with regular calibration. Your calibration professionals should be experienced and trained specifically in your equipment.

Knowledgeable service team

Who do you call when you have questions about your measuring machine, software or applications? The quality of the team supporting a metrology solution is critical to success. A comprehensive metrology partner can provide remote maintenance, programming and application assistance, measuring consultation and system update assistance.

Proactive service

When your quality assurance systems aren't running, you're losing valuable time and interrupting production. A true partner offers proactive solutions to prevent downtime.



A Partnership for Today and Tomorrow

ZEISS Industrial Metrology Solutions

Reliable, high-quality measuring technology consists of a measuring system, well-engineered software and world-class customer service and support. At ZEISS Industrial Metrology, these elements interact in perfect harmony.

You want to produce superior products and maximize profitability. That's why you invest in your company's people, technology and systems. That's also why you need a metrology partner you can depend on.

Partner with ZEISS

For the systems, training, service and customer support that make up a comprehensive solution.

- ✓ Broad portfolio
- ✓ Scalable solutions
- ✓ Application expertise
- ✓ Software ease and consistency
- ✓ Equipment installation and training
- ✓ Customer service and support

"The ZEISS CMMs have provided a recognition from our customers when they come in our lab, and they consider us to have the best metrology equipment available, so there is no question of our quality."

– A Quality Assurance Manager for Tolerance Masters, a precision machining facility for commercial and military aircraft

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