

Calibration Procedures – Best Practices

Q. What should the size and tolerance of these plug gauges be?

A. The size is stated on the certification, which is included with each gauge pin. The tolerances are certified to XX, which is +/- .00002”.

Q. If kept in the case, what interval do you recommend calibration?

A. I'll defer to the NIST definition -----> [NIST Recommended Calibration Interval](#)

Abstract:

“A measurement without its uncertainty is not adequate. The stated uncertainty ceases to be valid when the measurement system goes out of calibration. A conventional re-calibration interval may not be optimal for all usage conditions. The cost of re-calibration may be viewed as unnecessary expense when there is no indication that the system is out of calibration. We propose that the system should be checked at regular intervals in real-time. Then we provide a simple, generic, and widely applicable formula for the checking interval. The formula is illustrated with application to coordinate measuring machines.”

Citation: National Conference of Standards Laboratories

The bottom line is, it's not responsible for LaserLinc to dictate how often, or, never to re-certify your gauge pins because of the non-contact nature of usage. There are simply too many factors involved. Use your best judgment based on the recommendations contained in the NIST information.

Q. What would affect the size of each of gauge pin negatively?

A. Here are general handling guidelines. Neglecting any of these would be detrimental.

- Clean the part before gauging.
- Get rid of dirt, coolant, and chips from your process.
- Do not force the gauge.
- Use light pressure.
- Protect the gauge from damage, nicks and burrs allow inaccurate results.
- Keep gauges clean and oiled, this increases wear life.
- Avoid handling gauging surfaces. Fingerprints cause rust.