



The Precision Alliance

Technical Topics

Get the Accuracy you need

Accuracy is often a big stumbling block in the creation and integration of precision motion systems for use in various applications. The problem is that accurate and accuracy means different things to different people, and different industries.

For instance a packaging machine may require positioning of a product to within 1/8" where a semiconductor inspection machine may require a silicon disc to be moved to a position within 0.000004". Both are normal tolerances for their industries, but require totally different motion solutions and both can be measured in a dozen different ways.

One of the best ways to specify the accuracy of a motion system is to describe how you would measure it and what the tolerance is. This is a great way to distill the various accuracies / inaccuracies in any mechanical movement. It allows the manufacturer of the system to utilize the component tolerance budget in the most efficient way to design a system that will pass your inspection.

Additionally, by specifying how you will measure the system, you enable the manufacturer to duplicate the method. Measuring the same features with the same set-up gives you the best chance of receiving a product that will ultimately meet your requirements.