

Institute Quality Systems (IQS) Inspection Room

The state-of-the-art Institute Quality Systems (IQS) Inspection Room, located in the Southwest Research Institute® (SwRI®) Mechanical Fabrication Center's (MFC) modern facility, contains special IQS inspection equipment to ensure that parts are tooled to precise specifications. The IQS inspector assigned to the Inspection Room is an experienced machinist as well as a trained inspector. Pictured are some examples of services and equipment available in the IQS Inspection Room. For additional information pertaining to the MFC IQS Inspection Room, contact Mark Waldron at mwaldron@swri.org.



J&L 14" Optical Comparator. This machine produces a magnified silhouette of a part using either a 10-, 20-, or 50-power lens plus surface reflection. The silhouette is projected onto a screen and from this silhouette, measurements of the geometric shape of the part and its dimensions are collected.



Brown & Sharpe® Global Image Coordinate Measuring Machine (CMM). The CMM measures the physical geometric characteristics of an object using its x-, y-, and z-coordinates to determine its size and position. This machine may be manually controlled or controlled by a computer. This machine also allows technicians to import computer-aided design (CAD) models and measure a component from the model.



Digital Micrometer. Micrometers are used widely in machining operations to obtain precise measurements. They can also be used in conjunction with other metrological instruments such as dial calipers or depth, groove, or bore micrometers.