

What is the Thickest Sample That Can Be Punched with Model 310?

The Model 310 is designed to punch 3 mm discs from sheet materials without deformation of the center area of the sample. South Bay Technology, Inc. Application Note # 1 characterizes the deformation around the edge of punched brass samples. It is often asked what thickness of sample can be punched. The oft-repeated answer is the thinner the better. To give a better feel for the maximum thickness of material that the 310 can punch, two materials with significantly different hardness values with known, calibrated thicknesses that are readily available were used. An ordinary mechanics "feeler" thickness gauge was purchased from an automobile parts supply store was purchased. These feeler gauges have two types of materials, a hard stainless steel (most likely a 400 series martensitic stainless steel) and brass. The thickest brass sample was 0.016" (0.406 mm) and the 310 punched it relatively easily. The thickest stainless steel sample that could be punched was 0.010" (0.254 mm) and as can be seen from the image below, three samples were punched. However, the 310 could not punch through the 0.012" gauge, but it did cut the surface to a significant depth and the outline of the disc could be seen on the other side. With more effort and pressure, it was thought that we could do this thickness, but it could have possibly damaged the 310 so it was not done.

