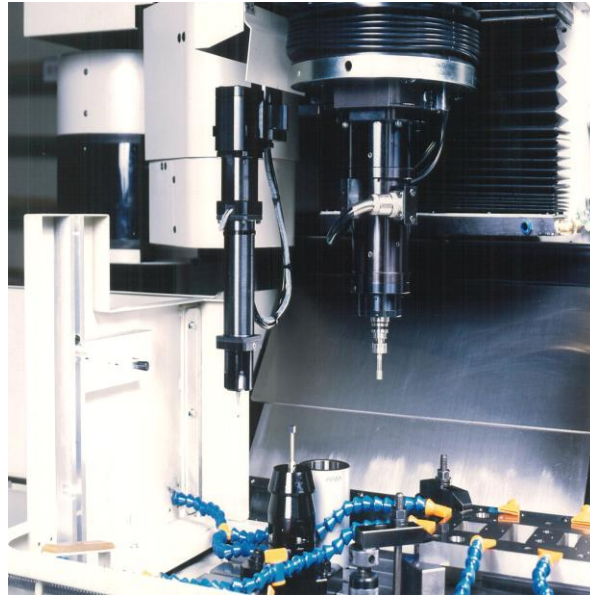


## Focus Technology Inc. Notes on New Technology: Jig Grinding

### Mitsui Seiki now Offers Part Probing in Jig Grinding



We have found that in today's world the manufacturers of molds for plastic products are pushing for snap-together components to better eliminate and reduce assembly time and service work. What used to be looser working tolerances now are very tight true positions, which ultimately mean the machinist must hold really half of the tolerance he is given to make the snap together assembly work. This is why we feel the one of the greatest advancement to improve the machine performance and process control is the introduction of probing to the Jig Grinding operation.

As an example, rather than setting up the part and manual aligning the fixture and part, the fixtured part is measured with the probe before grinding. Following the probe cycle, the Fanuc CNC, with the Coordinate Rotation function, will place the part into the center of the tolerance band. Many times, with parts as odd shaped some in mold work, it was very difficult and nearby impossible to compensate for inaccuracy through the fixturing. With a probe you can compensate and produce accurate parts as long as you can touch the feature. It is also prudent to remember that the modern Jig Grinders work in three dimensions as compared to the not so distant past where most work could only be done in 2D.

The AMCS 7 is a touch-trigger probe offered by Mitsui Seiki and acts as an omni-directional switch, effective in the  $\pm X$ ,  $\pm Y$  and  $+Z$  directions. The probe is automatically positioned in place on command and then driven against the workpiece or fixture. Each contact generates a signal, relating the contact point to a common datum. Repeatability of the probe is  $\pm 0.00004$  in. ( $\pm 1 \mu\text{m}$ ). The probe can offset the skew of the part or the fixture as well as allow you to establish true position between multiple holes. It can also inspect the hole for material removal and roundness. All this adds up to improved process control and tremendous savings in set-up and grind time, as well as substantially reducing scrap, something you need in mold work to stay competitive.

**Contact your Focus Technology Representative for more information on Mitsui Seiki Jig Grinders and Jig Bores**