THE FUTURE OF BENCH GRINDERS IS NOW

The power tool market today is highly competitive. Manufacturers must embrace technology and innovation in order satisfy the appetite of a new generation of technically savvy tool buyers. The time is right to introduce a novel bench grinder for the information age.

This product is protected by US Pat. No. 6,848,971 and licensing opportunities for manufacturers still exist. Don't be left in the dust. Contact us to negotiate a licensing agreement today.

IsoBevel

A promotional CD containing an informative MPEG Video as well as a PDF copy of the patent and a short presentation is available by contacting:

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IsoBevel

DIGITAL BEVEL ANGLE DISPLAYS FOR BENCH GRINDERS

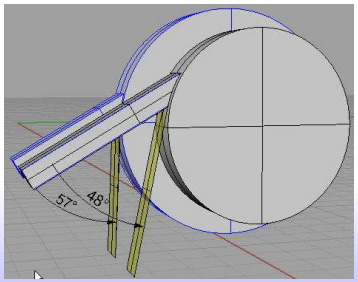
A BENCH GRINDER FOR THE INFORMATION AGE

For centuries, the grinding wheel has been an essential element of almost every woodworking and metalworking shop in the world. This simple device, like most tools has evolved with the technology of the times. It is therefore surprising that the modern bench grinder has not benefited from the enhancements that the information age has brought to many other tools and appliances. That is about to change. IsoBevel is proud to offer a digital solution to the problem of setting a bench grinder toolrest to accurately control the bevel angle that will be ground on tool or workpiece.

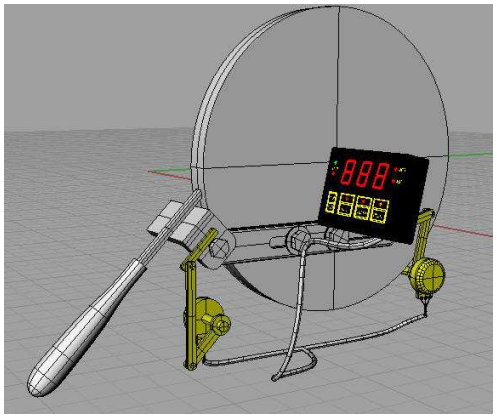
In the past, accurately and consistently setting a grinder's toolrest to obtain a desired bevel angle on a tool has been a time consuming and frustrating process because bevel angle scales were either nonexistent or inaccurate. Part of the mystique of master craftsmen lies in their ability to sharpen cutting tools with consistent results without the aid of jigs or angle measuring devices. By taking advantage of inexpensive state-of-the art programmable microcontroller technology, it is now possible to bring this capability that was once the exclusive domain of the master craftsman, to the ordinary user.

This prototype of a digital bevel angle indicator demonstrates the capabilities that modern technology can bring to a typical bench grinder. The user, simply manipulates the toolrest using the normal adjustment features of the bench grinder, while the bevel angle that will be ground on the tool or workpiece is displayed to the user on a digital display. With the simple push of a button, the device tracks angle adjustments on either the left or right wheel. The user interface also allows the user to ensure that the indicator maintains accuracy as the grinding wheels wear.

Changes in the wheel diameter change the relationship between the toolrest position and the bevel angle. To illustrate, this model shows two workpieces held in identical positions relative to the center of the grinding wheel. One can see that the simply changing the wheel diameter can dramatically influence the bevel angle that will be ground on the tool.



Toolrest position sensors, highlighted in yellow on the model, obtain the measurements that are required to calculate the bevel angle that will be ground on



the tool . A microcontroller chip processes these sensor measurements to calculate and display the bevel angle to the user. The prototype is larger than a production unit that would take advantage of printed circuit boards and surface mount components. The total retail cost of the components for the prototype unit less than 25 dollars. The cost of production units would be much less due to economies of scale.

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