

Why are MAGNA-MATIC Lawn Mower Blade Sharpeners the performance leaders of the industry?

DESIGN!

History

Around 1940, the rotary lawn mower blade was introduced as a low cost, quick, and easy way to cut large grass areas. The typical lawn mower blade has two sharp tips with extended knife edges that wear and require frequent re-sharpening. The blade works on the principal of the sharp edge colliding with the grass at a high speed.

Around 1960 the pedestal grinder began its transformation in becoming a specific lawn mower blade sharpener. The basic pedestal grinder was modified to extend the output shaft. The work rest was modified to permit edge angle and wheel wear adjustments. The result is a modified pedestal grinder type sharpener.

The most common sharpening machine is the pedestal grinder. The pedestal grinder sharpens drills, chisels, cutting bits, etc. in a grinding process called "free-hand" where the part is held by hand and guided to the grinding wheel. These tools are made from very hard steels (65 Rockwell). In this sharpening process only very small amounts of steel are removed. The rotary mower blade is made from a soft tempered steel (45 Rockwell). A lot of steel must be removed to sharpen a lawn mower blade.

Conclusion: The pedestal grinder is not very effective in sharpening the rotary mower blade. Generally available pedestal grinder wheels are too hard for mower blades. They tend to burn the tempered blade, reducing the original quality.

Basic performance of pedestal grinder

Time to sharpen a lawn mower blade: *About 6 to 12 min*

Quality of sharpening process: *Poor to questionable*

Basic performance of modified blade grinder

Time to sharpen lawn mower blade: *About 4 to 8 min*

Quality of sharpening process: *Medium to poor*

Other industry developments

Mechanical blade clamping arrangements with an x and y slide to guide the movement and the feed of the blade edge against the grinding wheel. Generally, in the time that it takes to properly clamp down and properly set for the x and y slide, the "free-hand" method of grinding can be finished with the re-sharpening. Clamping arrangements with a x and y slide, utilizing a "milling machine-like" drill press, using solid carbide end mills. Again, the time that is taken in the set up of this type of process *far exceeds the time available to make the re-sharpening of a lawn mower blade economical*. Milling is a very slow and costly metal removal process, which is usually reserved for high-cost, high-precision parts.



It is astonishing that the majority of blade sharpeners being manufactured today are the same 1950s modified bench grinder style.

In 1988 Magna-Matic Corporation introduced the industry's first high-tech MAG-9000 Lawn Mower Blade Sharpener. For straight (conventional) edged commercial & walk behind rotary mower blades.

Basic Performance

Time to sharpen a lawn mower blade: 60 seconds or less
Quality of sharpening process: Repetitive high quality

In the early 1990's the mulching blade (recycler lawn mower blade) was introduced. These new blades with multi-level curved edges were designed to re-cut the already cut grass clippings. This new type of blade with its curved edges quickly became a problem to sharpen. The pedestal grinder, modified pedestal lawn mower blade grinders, or the MAG-9000 Blade Sharpener cannot sharpen these blades. In fact any grinder or sharpener with a flat work table cannot sharpen the edge of a mulching blade.

In 1999 Magna-Matic Corporation introduced the MAG-8000 Universal Blade Sharpener, the industry's first sharpener to have the ability to sharpen both **straight edge and curved edge** mower blades to their original quality.

Basic Performance

Time to sharpen one blade: 60 seconds or less
Quality of sharpening process: Repetitive high quality

Safety and Convenience Features

Only Magna-Matic blade sharpeners comply with ANSI B7.1 (American National Standard Institute, NOTE: OSHA adopts ANSI's design specifications as a basis of their regulation)

Magna-Matic provides grinding wheels that are speed tested and balanced at 5500 RPM for extra safety. Standard industry rating is 3600 RPM.

Magna-Matic complies with ANSI, which dictates the use of grinding wheel flanges to hold the grinding wheel.

Magna-Matic complies with ANSI, which dictates that the arbor nut thread must be so that the nut will tighten as the spindle rotates (left-handed nut).

Magna-Matic complies with ANSI, which dictates a maximum 90 degree opening of the grinding wheel guard (1/4 of the periphery).

Magna-Matic complies with ANSI, which dictates work rest that does not permit jamming between the abrasive wheel and guard.

The MAG-8000 and MAG-9000 are fully enclosed grinding machines that offer protection to the operator.

Magna-Matic Sharpeners provide a single clockwise direction grinding wheel rotation. You control the work piece. In the event that you lose control the work piece is pushed away from the grinding wheel. Not jammed between the grinding wheel and worktable.