

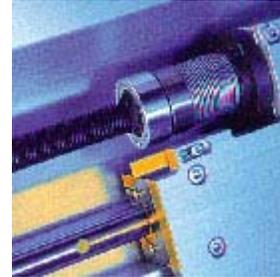
Gerber Router Drive Train Technology

Lead Screw vs. Rack & Pinion

A significant attribute which clearly distinguishes Gerber routers from their competitors is their drive train. Gerber uses a lead screw drive system compared to the more commonly used, and less expensive, rack and pinion configurations found on most competitive machines.

Gerber's Lead Screw Design

- Built for Precision, Speed, Reliability and Longevity
- Protected from flying debris
- Teflon[®]-Coated Lead Screws
- Anti-Backlash nuts take up backlash automatically
- Requires no lubrication



Anti-Backlash

When referring to the accuracy of a router, or any multi-directional positioning system, the word “backlash” is synonymous with the layman’s term, “slop”. Backlash causes the slop associated with directional changes of the router and translates into poor edge quality, inconsistent start/end positions, inaccurate depth control, repeatability problems and other accuracy related issues.

The Gerber lead screw drive incorporates a patented anti-backlash system which automatically takes up and compensates for backlash which may develop due to the wearing of the lead screw and/or lead screw nut.

Aluminum Construction vs. Steel Construction

Unlike steel, aluminum can be molded, cast and extruded into virtually any shape. This provides our design engineers more flexibility in designing a machine which will incorporate all of the various design elements critical to the machines specific application.

Custom Extrusions

- Engineered for Solid Construction
- Designed for stiffness and rigidity
- Custom designed "not off the shelf items"
- Light weight reduces stress on moving components
- Designed for easy field service



Our engineers are able to design components which are much stiffer, yet lighter in weight, than that of our competitors. A perfect example of this is the Tie Beam which is attached to the left and right beam support castings of the Sabre 404 and 408 (shown above). This extruded aluminum component, located beneath the table, drives the main beam in the “Y” axis. Its stiffness is vital in order to maintain the system’s accuracy. The structural cross section used throughout the length of this component cannot easily be reproduced using steel. And, even if it could be, it would add unnecessary weight to the component, thereby increasing stress on the motors which drive the beam.