The CAM.2 represents the ultimate in guidewire grinding, capable of holding the tightest tolerances in the industry.

In the exciting field of micro-grinding, the capability of the CAM.2 to produce flats, radiuses, needle points, and non-linear shapes makes this the perfect machine to grind complex medical guidewires, dental parts, and small precision parts for various industries. Combining the latest in multi-axis servo motor control, submicron positioning, and an intuitive 15” HMI, the CAM.2 offers unmatched performance. Previously unproduceable parts can be made easily, with minimal setup time, and with limited operator training. Glebar’s ability to customize all aspects of our system, going beyond material handling to incorporate features that were previously separate operations, have saved customers time, floor space, and production costs.

Patented Feeding Process
A conventional centerless grinder pulls the part through the machine by the work and regulating wheels. To grind a profile, the part’s position is detected by sensors and the gap between the wheels is adjusted. Instead, the CAM.2 uses Glebar’s patented dual-carriage linear motor part feed system. Rather than monitor and react, the position, speed, and rotation are under absolute control at all times — controlling the grind with a high degree of diameter and length accuracy.

Two Modes of Operation (OD and Centerless)
In OD mode, a narrow wheel is used and the part is fed through a hydrostatic bushing. In this mode, micro-grinding and any array of complex shapes including tapers, flats, radiuses, and threads are made possible. For less complex geometries, centerless mode incorporates the best of both worlds, maintaining absolute length and diameter control while allowing for greater speed and material removal using a wider wheel. Despite the implication, centerless mode on the CAM.2 does not use a regulating wheel, instead, it requires only a centerless fixture, greatly simplifying setup and changeover.

Granite Machine Bed
The CAM.2 is built on a 2,200 pound 6” (152mm) thick granite bed, for enhanced rigidity, thermal and vibratory stability.

Automatic CNC Dressing
The CAM.2 includes automatic CNC dressing, designed for both diamond roll or single-point dressing. Using no physical templates, lead-in and lead-out tapers can be easily changed. Complete forms, including radii, can be dressed accurately into both conventional and super-abrasive wheels. The programmed wheel shape is rendered in real-time, for complete confidence in the final shape.

Custom Software and Glebar Advanced Analytics
The control software is entirely developed at Glebar and is fully customizable to address your application and process. The intuitive touch screen interface allows for ease of use and flexibility. The machine software interface was developed to allow an unskilled operator to run many high precision machines simultaneously. Glebar Advanced Analytics that interfaces to supervisory plant controls, is also available to gather production data and track maintenance and critical operational statistics.

Remote Connectivity and P4K Compatible (Metrology Device)
Remote connectivity is available via EtherCAT®, by and large the fastest industrial Ethernet technology. The P4K scans and provides feedback of the entire component geometry for all parts in a cycle to automatically correct the grinding wheel dress shape (correcting the wheel dress shape from any measurement device is patent-pending).

THE GLEBAR ADVANTAGE: Redesigned from the ground up, the CAM.2 represents a completely new paradigm in micro-grinding. Unlike other designs, there are no sensors or sensing systems to move, and the accuracy is not dependent on wire cut length. Competitors try to replicate our results to no avail by affixing additional systems onto decades-old designs.
KEY FEATURES

- Absolute control over lengths and diameters
- 6” (152mm) thick granite base, for enhanced thermal and mechanical stability.
- 3D visualization of part and wheel shape
- Secondary Spindle Assembly used as a cutoff wheel; to grind slots or angular slots into a part, and can be used to generate sharp internal corners on a part
- Single Tower CAM.2 available for short parts and needles
- In-line Grit blasting for marker bands or general abrasion
- OPC (OLE for process control) server connection to SCADA or other ERP or data management systems Collect production data and machine status in real time
- Vision system integration. Grind profiles based on identifying and locating inconsistent features on a product
- Programmable retractor. Process proximal and distal grinds in one operation
- Up to 16 foot (4.8meter) autoloaders
- CNC dressing
- Run in centerless mode at centerless speeds
- In-line coining operation
- Spool Direct System
- Unlimited part library
- Unique state of the art motion control
- Full underlying G-code control
- Variable part rotation speed
- Remote Connectivity for Troubleshooting
- Clean and contained mist-free work envelope
- 15” HMI touchscreen controls
- In-line gauging and P4K gauge feedback available
- Multi-level password access
- CE-certification and approved safety interlocks available

SPECIFICATIONS

Work Wheel Diameter: 12” (305mm)
Work Wheel Speed: variable up to 3600 RPM, 11000 SFPM (56 M/S)
Work Wheel Spindle Power: 3HP (2.2 kW)
Diameter resolution: 0.1 µm (0.000004”)
Length resolution: 0.1 µm (0.000004”)
Incoming Stock Diameter: Min 0.005” (0.13mm), Max 0.250” (6.35mm)
Minimum Grind Diameter: 0.0005” (0.013mm)
Machine Weight: 3400 lbs.

Visit website for a full list of available accessories for this machine. www.glebar.com/machines/CAM.2

At the heart of the CAM.2 lies our continuous feed system, which allows virtually unlimited part length. Consisting of a pair of direct drive linear motors, their exacting motion is synchronized by an advanced controller, incurring no loss of precision during part handling. Competing designs must stop, reset, and re-clamp the part, causing them to be inefficient, lose length accuracy, and introduce the possibility of defects such as undercuts at re-clamping points. Our pair of linear motors is checked by laser interferometer to ensure sub-micron accuracy, allowing the machine to deliver performance others can only claim.

Patented Multi-Access Positioning System

Parts Unloader

CAM.2 With Feeder