

# GLEBAR's GT-9AC vs The Competition



**GT-9AC**

**The Competition**

<b>Machine Platform</b>		
Design	Built on <b>21st century</b> technology	Designed on existing components dating to the original <b>1950's</b> machine
Base	Precision flat granite base for temperature and vibration stability Rigid Weldment base	Cast iron bed extends over base, reducing machine stability Steel base
Slide motor	Servo drive, with position compensation during move	stepper drive, with position compensation after move
Regulating Wheel Drive	Servo-controlled direct drive Dynamically slow down the thrufeed rate by varying the speed of the regulating wheel during the grind cycle to optimize cycle time.	Step motor through transmission case Fixed regulating wheel speed.
<b>Features</b>		
Mist and coolant	Standard, environmentally clean enclosure ensures no drips or misting in the production area	Coolant misting surrounds work area and operating personnel – mist control optional
Technology	High speed camera mounted on precision 0.1 micron slide tracks wire position in real time. Unique data acquisition method ensures no latency. Every position is captured so ground length accuracy is second to none.	Sensor glass sensitive to scratching and residue with wire rotating @10,000 RPM during the grind. Any lateral movement in the wire produces gaps in position measurement leading to length error.
Proximal Sensing device	High frequency data acquisition (10kHz) results in fast cycle without sacrificing length tolerance	14 sensing pixels over 36" with 0.0025" resolution producing length accuracy of 0.040"
Wire detection Sensors	Three options to control product placement in the grind zone <ul style="list-style-type: none"> <li>o Photoelectric sensor</li> <li>o Laser thru beam sensor</li> <li>o Vision system – for applications where pre-process features vary from part to part</li> </ul>	
Wire Tracking System	Unique real-time, vision-based system with 1 micron position feedback continually updates wire position, insuring crisp ground profiles.  Real-time position feedback based on proximal wire detection and velocity tracking, pioneered by Glebar.	Electronics tracking the wire are obsolete and slow, producing length errors. Replacement parts are hard to find, expensive, and have long lead times, creating unnecessary downtime.
Work rest blade insert	Acoustic Emissions Sensing automates blade touch off and blade sizing operation for ease of setup	
CE-certified safety interlocks	Standard	
Remote diagnostic abilities	Standard	
Automatic wheel balancing	Available	
Acoustic Emissions	Provides Auto Touch-off for Ease of Setup	
<b>Control System</b>		
User Interface	Industrial Touch screen Custom written software, creating custom interface Little skill required, most setup features are built in and simple to use.	Keyboard and mouse Limited, canned operator interface High operator skill needed to set up
Control Software	Includes a multitude of OPC tags for Overall Equipment Effectiveness data gathering software, which allows a supervisory control system to monitor all aspects of production	
Electronics integration	Mounted in the base	Roll-around electronics cabinet with cable connectors, sometimes mounted over the coolant tank
Multiple machine interface capabilities	Up to seven GT-9AC and CAM.2 machines can be networked to each P4K gauge using unique machine IP addressing. Diameter feedback by lot can be sent back to the machine for diameter adjustment without stopping the process.	
CPU Speed	125 MHz with multi-axis high performance servomotor controller	75 MHz controller
Electronics	Contained in a NEMA 4 rated interlocked cabinet	Housed in separate cabinet above coolant tank
<b>Specifications</b>		
Length accuracy	+/-0.005" Highly accurate, as it is not reliant upon sensors	+/-0.020" Subject to wire cut accuracy, and eye bar has to be moved to accommodate wires of different lengths
Minimum unground wire diameter	0.008"	
Minimum ground wire	0.0014"	
Maximum Length	16', with 3' and 6' options available	12'
Grinding range	Multiple options with tailored feeder (3',6',16')	up to 35" and limited to sensor array
Grinding shape capabilities	Full geometry control on parabolic, arcs and segmented linear tapers.	Taper grinding only, limited geometry
Wire adjustments	One adjustment for pinch roller used to position the wire from the feeder into the grind zone	Multiple adjustments to set and enable wire to move through feeder tubes and loops
<b>Wire Feeding</b>		
Wire Cutter	Available for short grinds	
Wire Unloader	Processes both distal and proximal grinds in one operation	
Wire staging area	Standard, reducing overall cycle time	None
Load time	15 seconds Wire remains in-line with machine, with no kinking risk	20+ seconds Wire path is looped during loading and unloading, causing misfeed and, over time, unnecessary downtime.
Wire pick-up	Quick connect, magnetic vacuum pick-up head sized for the wire ensures reliable wire feeding	Grooved wheel singulating pickup, ineffective at pushing wires through the tray
Spool to feeder	Programmable wire length set from the control processes wire from a spool. To process NITI™ or SLT™ automatically.	