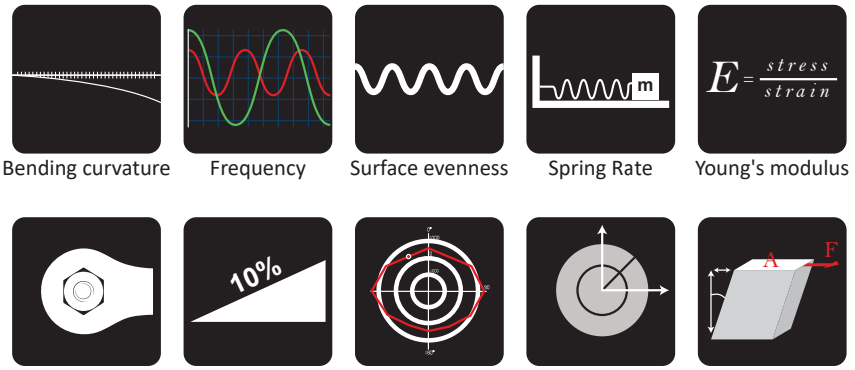
AUDITOR® EI HDI HEAVY DUTY INDUSTRIAL

050900 *Shaft EI Analysis and Modelling Sytem*

An affordable EI Shaft analyzer and Modeler that has more capability than any other instrument in the class! A new development from Golfmechanix now made possible thanks to the availability of high precision, moderately priced servo drives and controllers!

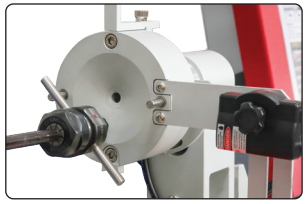
The Auditor EI Maps shafts geometry, straightness, bending profile, spring rate torque, frequency, spine and calculates young's modulus, Shear modulus, polar moment, balance point, bend point etc. with all measurements performed in just over 15 minutes for iron shafts and 18 minutes for wood shafts!

When compared to “other Rigs”; The Auditor EI distinguishes itself by a simpler construction, fewer automation parts and a precisely sequenced, PLC controlled servo motion which translates into a robust fault tolerant design that is easy to trouble shoot and fix.

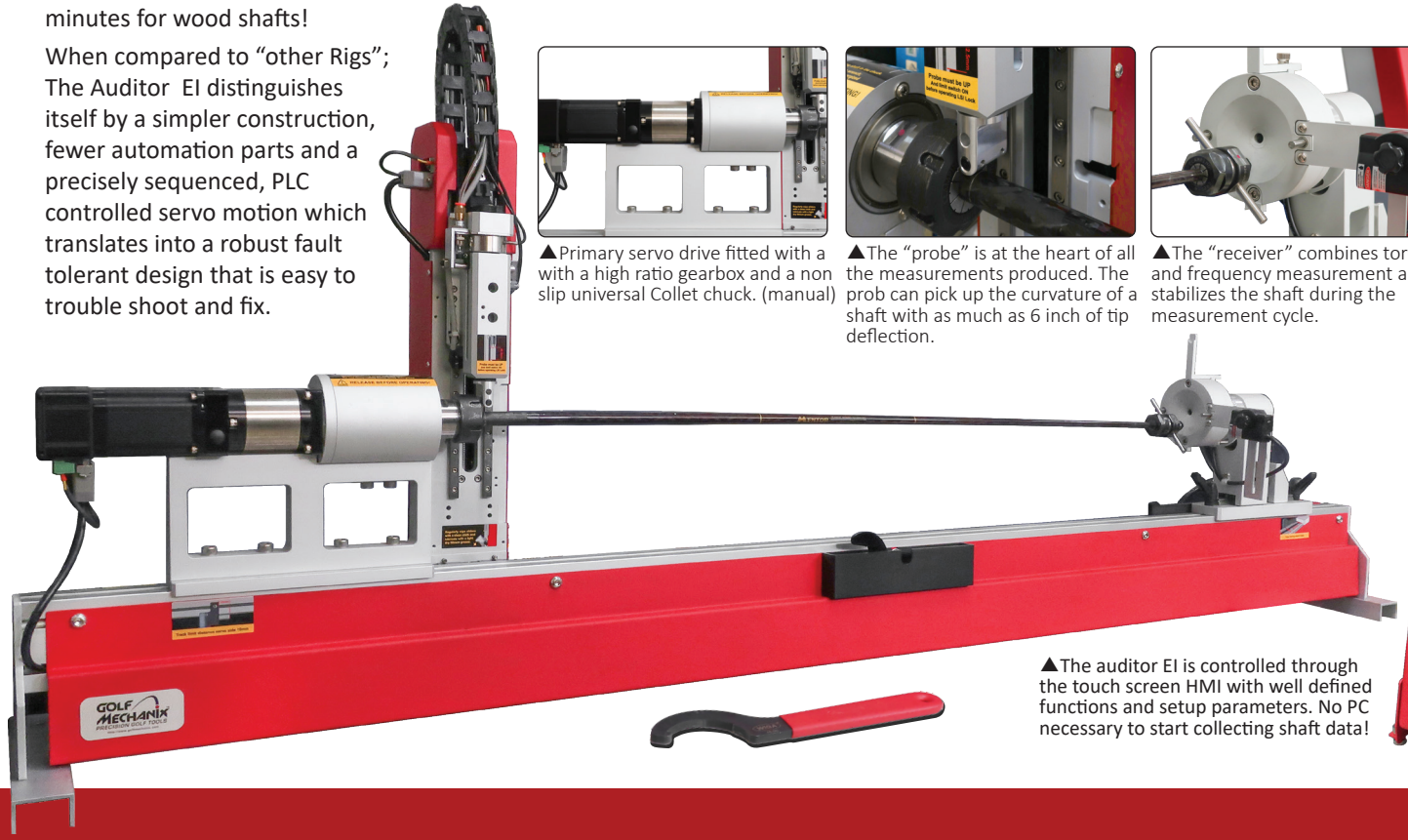


▲Primary servo drive fitted with a with a high ratio gearbox and a non slip universal Collet chuck. (manual)

▲The “probe” is at the heart of all the measurements produced. The prob can pick up the curvature of a shaft with as much as 6 inch of tip deflection.



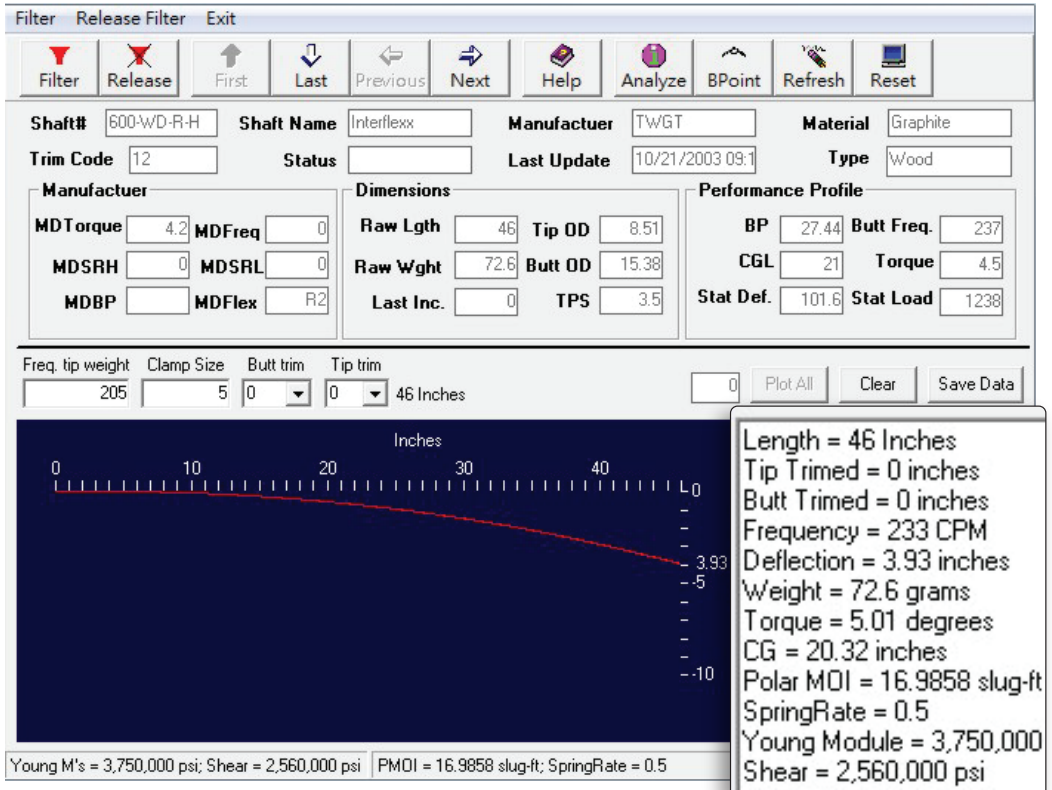
▲The “receiver” combines torque and frequency measurement and stabilizes the shaft during the measurement cycle.



▲The auditor EI is controlled through the touch screen HMI with well defined functions and setup parameters. No PC necessary to start collecting shaft data!

AUDITOR EI

Analyser Software



A powerful analytical piece of software that has the feel of a database.

The core EI analyzer drills down the data gathered and computes an approximation of the physical model using a well established set of beam bending equations.

The results derived by the analyzer are then compared to the physical sample and validated. The EI analyzer is structured to allow the simulation of butt and tip trimming and resulting changes on shaft weight, balance point, bend point, Frequency and tip deflection.

The simulated virtual trim of the shaft can be a major asset to the savvy club fitter as it reduces the potential for a spec mismatch, saving both time and cost in the process.

The EI analyzer can also be used to bench mark and rerverse engineer shaft performance segment by segment, giving the manufacturing engineer a powerfull tool tthat can used to realize significant savings in manpower and exotic materials.

What we measure:

-Shaft Length*
-Shaft Diameter (OD)
-Shaft Diameter* (ID)
-Spring Rate (Tip deflection)
-Twist angle (Torque)
-Tip frequency**
-Spine magnitude**
-bending curvature**
-Surface weave**
-Total weight**
-Center of mass **

*Manual external measurement required
**Informational qualitative measurement produced by the Auditor EI.

What We compute:

-Polar moment
-Young's modulus
-Shear modulus
-Bend profile*
-Tip Frequency*
-Twist angle*
-Weight*
-Bend point*
-Balance point*
-Bend point*

*Results are also computed for the specimen using the virtual butt and tip trim.

General specifications:

Shaft length	29"~47"	Linear Speed Vertical	2mm/sec
Butt diameter	14~16 mm	Linear Speed Hztl	24mm/sec
Max tip deflection	4"	Data file format	.CSV
Max tip load	50 Kgf	Touch screen HMI	7" diagonal
Max torque	5 N.m	Touch Screen Resolution	800x480
Linear resolution vertical	0.01mm	AC Power	110~240VAC
Linear resolution Hrztl	0.01 mm	Min Air pressure	6 bars.
Angular resolution	0.01 degree	Test Platform dimensions	L1858xW274xH538 mm
Angular speed	15 Deg/Sec	PLC cabinet dimensions	W295xH845xD295 mm
		Total Weight (Crated)	125 Kg

Customized report output Compatible with Big Screen TV!