



Ergonomic Technologies Corp.

Ergonomic Risk Assessment & Workplace Injury Prevention Solutions

www.ergoworld.com | 516-682-8558 | info@ergoworld.com

Product, Tool & Equipment Measurement

Measurement-Based Ergonomic Assessment for Design Excellence

ETC specializes in applying advanced measurement technologies to objectively assess how people interact with products, tools, and equipment. Analyses are conducted in the ETC Laboratories or on-site at client facilities delivering data-driven insights that improve design, enhance user comfort, reduce fatigue, and minimize injury risk and liability.

OVERVIEW

Design decisions made without human factors data carry real risk to users, to product quality, and to the organizations behind them. ETC's measurement-based approach replaces assumption with evidence, providing manufacturers, designers, and engineers with objective biomechanical and physiological data to guide development and validate performance.

Assessments are available at any stage of the product lifecycle from early concept evaluation to in-market benchmarking. Whether evaluating an existing tool for injury risk, comparing competitive products, or validating a new design before launch, ETC delivers the technical rigor needed to make confident, defensible design decisions.

MEASUREMENT TECHNOLOGIES & METHODS

ETC applies a comprehensive suite of validated measurement technologies, selected and combined based on the specific demands of each assessment:

■ Muscle Effort Testing	■ Dynamic Postural Measurement	■ Contact Pressure Mapping
■ Whole Body Vibration Analysis	■ Hand/Arm Vibration Analysis	■ 3-D Motion Tracking
■ Human Modeling	■ Biomechanical Analysis	■ Heart Rate Monitoring
■ Global Anthropometric Analysis	■ Subjective Comfort Surveys	■ Statistical Analysis
■ Literature & Research Reviews	■ Human Factors Evaluation	■ Usability Testing

SERVICES OFFERED

Product, Tool & Equipment Assessment

ETC's product assessment service provides an independent, expert evaluation of how a product, tool, or piece of equipment performs against human capabilities and limitations. Assessments can be conducted in-laboratory for controlled measurement, or on-site to capture real-world use conditions.

- Expert ergonomic review of existing products, tools, and equipment
- Comparative Best-in-Class analysis across competitive products or design variants
- In-depth ergonomic assessment of new product design prior to market launch
- Evaluation of design suitability for the intended end-user population
- Product benchmarking to establish performance baselines and identify improvement opportunities
- Analysis of ergonomic effects of current products in active use
- Design recommendations addressing:
 - User comfort and fit across diverse body dimensions
 - Task efficiency and user performance
 - Fatigue potential and sustained-use tolerance
 - Injury risk reduction and liability mitigation
 - Usability across intended use conditions and user populations

Ergonomic Specifications

ETC develops detailed ergonomic specifications that translate assessment findings into clear, actionable design criteria, giving product teams, engineers, and procurement the standards they need to make sound decisions.

- Process specifications, ergonomic requirements embedded in design and development workflows
- Product, equipment, and tool specifications, dimensional, force, grip, and usability criteria
- Human/product interaction specifications, defining how users' interface with controls, handles, displays, and systems

APPLICATIONS

- Hand tool design and evaluation: grip force, vibration exposure, posture, and fatigue
- Power tool assessment: hand/arm vibration, trigger force, and whole-body vibration
- Seating and vehicle interior ergonomics: contact pressure, posture, and comfort
- Office furniture and workstation evaluation: adjustability, reach, and postural support
- Consumer product design: usability, comfort, and anthropometric fit
- Medical device and laboratory instrument assessment: fine motor demand, force, and posture
- Industrial equipment evaluation: operator interface, visibility, and physical workload

TRUSTED BY LEADING MANUFACTURERS & DESIGNERS

ETC has partnered with product manufacturers, design firms, and research institutions across industries to deliver measurement-based ergonomic assessments that improve products and protect users:

Black & Decker	Lear Seating Corporation
Bressler Group	NACCO Materials Handling Group
Cooper Tools	Pentel
Design Systems, Inc.	Procter & Gamble Mfg. Co.
Group Four Design	Radius Product Development
Haworth, Inc.	Recaro
Honsa Tool	SUNY Stonybrook
Ingersoll-Rand Tool & Hoist	Symbol Technologies
Johnson & Johnson	VistaLab
Knoll	

Contact ETC to Discuss How Your Business Can Profit Through Ergonomics

516-682-8558 | www.ergoworld.com

© 2026 Ergonomic Technologies Corporation. All Rights Reserved.