TensileMill

THE TENSILEMILL WAY

CONTENTS

ABOUT TENSILEMILL 2
THE TENSILEMILL WAY 2
JUSTIFYING YOUR INVESTMENT 4
OUTSOURCING VS. BRINGING EQUIPMENT IN-HOUSE 7
THE TENSILEMILL GUARANTEE 9
ADDITIONAL BENEFITS 10
PROFESSIONAL BUSINESS REFERENCES 15

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ABOUT TENSILEMILL

TensileMill CNC is empowering operators of all skill levels to attain top-tier quality control results through precise and user-friendly sample preparation solutions.

TensileMill helps laboratories and manufacturers bring specimen preparation and testing in-house. Our solutions cover flat, impact and round specimen preparation, complementary longitudinal polishing, and the appropriate universal testing machine or impact testing machine, configured around your application. Add an individual capability or build a complete solution around accessibility, repeatability, scheduling control and support.

HOW WE HELP CLIENTS

Accelerate Skill Development: Operators of all skill levels become productive on TensileSoft quickly, with training available to support onboarding and staff changes.

Enhance Test Reliability: Precise, repeatable specimen preparation supports consistent, accurate test results.

Streamline Production: Gain control over scheduling and reduce reliance on outsourced preparation and testing with a turnkey in-house solution.

Deliver Robust Support: Remote and in-person service guides your team promptly and effectively.

SPECIALIZED EQUIPMENT AND SERVICES

Benefit to the client: TensileMill supplies flat, round and impact specimen preparation equipment and longitudinal polishers, plus universal testing machines, impact testing machines and hardness testers from leading global manufacturers.

By delivering comprehensive calibration, preventative maintenance, and training services backed by ISO 17025 and other accreditations, TensileMill provides a one-stop solution that streamlines your quality control processes and enhances overall efficiency.

WHO CAN BENEFIT FROM TENSILEMILL CNC?

- TESTING FACILITIES
- EXTRUSION MANUFACURERS
- HEAT TREATING FACILITIES
- METAL FABRICATORS
- AUTOMOTIVE MANUFACTURERS
- TOOL MANUFACTURERS
- QUALITY CONTROL LABORATORIES
- AEROSPACE
- R&D FACILITIES
- GOVERNMENT FACILITIES
- EDUCATIONAL FACILITIES
- AND MORE...

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THE TENSILEMILL WAY

We Help Identify Your Technical Requirements

Your TensileMill consultant helps to identify your short-term and long-term Tensile Sample Preparation, Tensile Testing, and Quality Control technical requirements.

We Supply Your Turnkey Solution Proposal

Your TensileMill consultant will provide you with the Turnkey Solution meeting your technical requirements.
Accompanied with your Turnkey Solution, we will include Frequently Asked Questions (FAQs) and Business References.

We Offer Proof of Concept

TensileMill provides a no-cost proof of concept to guarantee that the quoted solution will meet your technical requirements.

We Process Your Order

We will assist you with the Vendor Registration process, and once the order is submitted, the Order Processing will commence

We Deliver Your Turnkey Solution

TensileMill CNC, Inc. proceeds with supplying your complete solution within the proposed lead time.

We Provide Training and Installation Support

If your remote and/or in-person training sessions was included with your order, we will book your session 1-2 weeks before system delivery

We Provide Service and Calibration Support

Our team is ready to assist with any service or support needs.
Phone us @ (877) 672-2622 ext. 3 or ext. 0
Email us @ sales@tensilemillcnc.com

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JUSTIFYING YOUR INVESTMENT

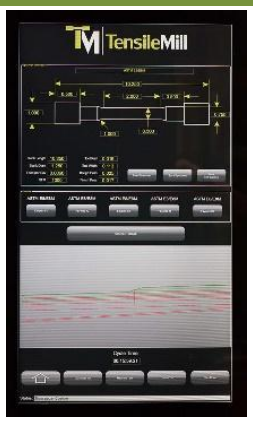
WHY INVEST IN TENSILEMILL CNC, INC.

TensileMill's systems are meticulously engineered to enhance productivity and accuracy in the process of preparing tensile samples. Here are the key factors that set us apart from our competitors:

#1. TensileSoft™: The Most User-Friendly CNC Tensile Sample Preparation Software with General Purpose CNC Machining Capabilities

Every TensileMill CNC system runs our industry-leading TensileSoft™ interface. Operators select the desired industry standard (ASTM, ISO, DIN, JIS and more) with a few button presses, and operators without CNC experience prepare specimens accurately and repeatably, reducing labor cost and the time needed to bring new operators up to speed.

TensileSoft is available in two versions: **TensileSoft V1** on the **MachMotion** controller foundation and **TensileSoft V2** on the **FANUC** controller foundation. Both use the same specimen-first workflow for flat specimens on TensileMill mills and round specimens on TensileTurn lathes.

TENSILESOFT V1 · MACHMOTION CONTROLLER FOUNDATION		TENSILESOFT V2 · FANUC CONTROLLER FOUNDATION	
			
Flat preparation controller	Round preparation controller	Flat preparation controller (FANUC)	Round preparation controller (FANUC)
Finished flat specimen	Finished round specimen	Finished flat specimen	Finished round specimen

Both versions provide a seamless experience for adding and adjusting specimen sizes through the touch-screen interface: flat specimens on our mills and round specimens on our lathes. To see each interface in action, watch the videos below.

TensileSoft V1 (MachMotion): **Watch the TensileMill CNC MINI touch screen control panel video on YouTube**

TensileSoft V2 (FANUC): **Watch the TensileMill CNC Classic Upgrade FANUC controller clip**

MAJOR BENEFITS:

Offers complete versatility for virtually all types of tensile sample preparation requirements and enables fast onboarding of operators without CNC experience, with most becoming proficient in specimen preparation within hours of training. Reduces the impact of operator turnover: a consistent interface and available training support make it easier to bring new quality control staff up to speed.

#2. Gain Full Control of Your Specimen Preparation and Testing Process While Reducing Outsourcing Costs

Bring specimen preparation and testing closer to your quality-control team. Gain greater control over scheduling, reduce reliance on external preparation services, and build a turnkey solution around the capabilities your operation needs. A complete in-house business case covers flat, impact and round specimens: prepare, polish where required, then test on the appropriate universal testing machine. Impact preparation is paired with an impact testing machine. Use the **ROI Calculator** to assess your current outsourcing expenses and build your business case. Impact testing equipment is also available. Consult your TensileMill specialist.

MAJOR BENEFITS:

- Gain control over lead times for your testing processes and reduce dependence on external laboratory schedules.
- Reduce recurring outsourcing, shipping and insurance expenses.
- Strengthen relationships with existing clients and suppliers through faster, more predictable results.

#3. Alleviate the Stress on Your Production Machine Shop by Putting Complete Control of Tensile Sample Preparation Process in the Hands of Quality Control Personnel

By incorporating a dedicated flat, impact or round **Tensile Sample Preparation system** within your organization, you reduce competition between the **CNC Operators** and the **Quality Control Team** for time on production machines. There is no longer a struggle for priority on the existing equipment. Specimen preparation no longer waits for an opening on a large machining center, and the production schedule of that machining center is no longer interrupted by the procedures involved in preparing tensile specimens.

Moreover, your quality control team gains improved control over scheduling and production support: it is no longer dependent on the machine shop to provide the specimens needed for testing. This **streamlined approach** enhances efficiency, reduces conflicts and supports a smoother workflow throughout your organization.

MAJOR BENEFITS:

- Each member of your team has a designated machine for a designated job, performed efficiently and effectively.
- Reduce staff conflicts over sample preparation on a standard CNC milling center.
- Avoid production interruptions associated with sample preparation on your standard CNC milling centers.

OUTSOURCING VS. BRINGING EQUIPMENT IN-HOUSE

Companies that outsource specimen preparation and testing to third-party laboratories face four major challenges that affect their operations:

EXTENDED LEAD TIMES:

Testing Delays: Third-party labs serve multiple clients, potentially leading to longer lead times that can disrupt production and slow down product development.

Limited Control: Companies must rely on external schedules, and unexpected lab issues (equipment, personnel) can further delay timelines for sample prep and testing.

QUALITY CONTROL CONCERNS:

Inconsistent Standards: Labs may use different protocols, leading to unreliable results, affecting certification and compliance.

Miscommunication: Misunderstandings can result in improper sample prep or testing, requiring retesting and causing delays.

LOSS OR DAMAGE TO SHIPMENTS

Lost/Damaged Samples: Risk of shipment loss or damage causes delays and re-preparation expense, especially for specialty products with NDA requirements.

Shipping, Insurance and Delays: Transportation and insurance costs add up, and logistical or customs delays can worsen lead times, especially internationally.

LIMITED FLEXIBILITY / RESPONSIVENESS:

Customization Limits: Labs may lack flexibility for urgent or customized requests, delaying urgent quality decisions and production releases.

Communication Delays: Additional layers of communication slow feedback and issue resolution, leading to inefficiencies.

OVERALL IMPACT

These challenges cause inefficiencies, unexpected costs and delays that can hold up purchase orders, production releases, quality decisions and the capacity to grow.

How does your current outsourcing expenditure compare with a complete in-house solution?

BRINGING EQUIPMENT IN-HOUSE: INVESTMENT COMPARISON

Bringing TensileMill's specimen preparation and testing equipment in-house addresses all four major challenges. The comparison below shows what an illustrative turnkey package includes, what annual outsourcing expenditure looks like at typical volumes, and how many months of outsourcing expenditure equal the turnkey investment. All figures are in USD.

A. WHAT THE TURNKEY INVESTMENT INCLUDES

APPLICATION	ILLUSTRATIVE TURNKEY EQUIPMENT	INVESTMENT
Flat	TensileMill MINI specimen preparation equipment plus Universal Testing Machine	$100,000*
Round	Appropriate TensileTurn specimen preparation equipment plus Universal Testing Machine	$120,000*
Impact	TensileMill Classic Upgrade specimen preparation equipment, applicable notching, and Impact Testing Machine	$110,000*

Reference pricing is based on basic application details. Your investment may be lower or higher depending on your exact technical specifications, selected models and equipment configuration. Request a quotation for accurate pricing.

Each package includes at least two equipment units as a turnkey preparation-and-testing solution; figures are approximate package investments, not single-machine prices.

B. ILLUSTRATIVE ANNUAL OUTSOURCING EXPENDITURE

ANNUAL SPECIMEN VOLUME	500	1,000	1,500
Average specimens per month	41.7	83.3	125
Flat at $140 per specimen	$70,000	$140,000	$210,000
Round at $160 per specimen	$80,000	$160,000	$240,000
Impact at $230 per specimen	$115,000	$230,000	$345,000

Illustrative benchmarks: preparation-and-testing assumptions for comparison with North American laboratory outsourcing costs. Actual charges vary; use your own laboratory costs for a personalized assessment.

C. MONTHS FOR OUTSOURCING EXPENDITURE TO EQUAL THE TURNKEY INVESTMENT

TURNKEY SOLUTION	500 PER YEAR	1,000 PER YEAR	1,500 PER YEAR
Flat preparation + tensile tester	**17.1 months**	**8.6 months**	**5.7 months**
Round preparation + tensile tester	**18.0 months**	**9.0 months**	**6.0 months**
Impact preparation + impact tester	**11.5 months**	**5.7 months**	**3.8 months**

***Equipment configurations:** approximate USD package prices. Actual models, capacity, fixtures, accessories and installation requirements depend on the application; higher-capacity systems generally increase the investment.

Calculation basis: Months shown compare outsourcing expenditure with investment, excluding in-house operating costs, shipping, insurance and delay-related costs.

Use our **ROI Calculator** for a personalized comparison.

CALCULATE YOUR OUTSOURCING COSTS

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THE TENSILEMILL GUARANTEE

Validate your material and specimen requirements before you invest.

At TensileMill, we ensure that your financial investment in equipment comes with complete peace of mind. Our professional business guarantee serves as a **proof of concept**, verifying the quality and reliability of our products and services. We offer a comprehensive service that includes **preparing and/or testing your own specimens** on the proposed **flat**, impact or **round** specimen preparation equipment, including **longitudinal polishing** where the proposed purchase includes that step. The process is documented through detailed photographs and professional videos, and the specimens are returned for your inspection. Additionally, our team provides expert engineering recommendations, ensuring that the solution we quote is the right one for your needs. To further demonstrate our commitment, we offer a **free sample preparation service**. Simply **contact us**, and we will handle the entire process at no cost.

Engineering report examples are available for various materials and specimen preparation applications. Ask your TensileMill consultant for relevant examples, or visit the appropriate product page on our website to review available reports.

ADDITIONAL BENEFITS

#4. Compact and Quiet Tensile Sample Preparation Systems for Space-Constrained QC Labs

TensileMill CNC equipment is designed for facilities with limited space while ensuring efficient tensile sample preparation. Our compact systems, measuring approximately 83" x 80" and 70" in height*, integrate into your workspace without sacrificing performance. Noise levels of 60-90 dB* support a safe, comfortable work environment.

Request our FAQ sheet on product features and installation guidelines to assist your maintenance team with machine setup.

*Dimensions and noise levels are approximate and may vary slightly with the latest model and configuration. Confirm current specifications with your quotation.

FLAT ROUND

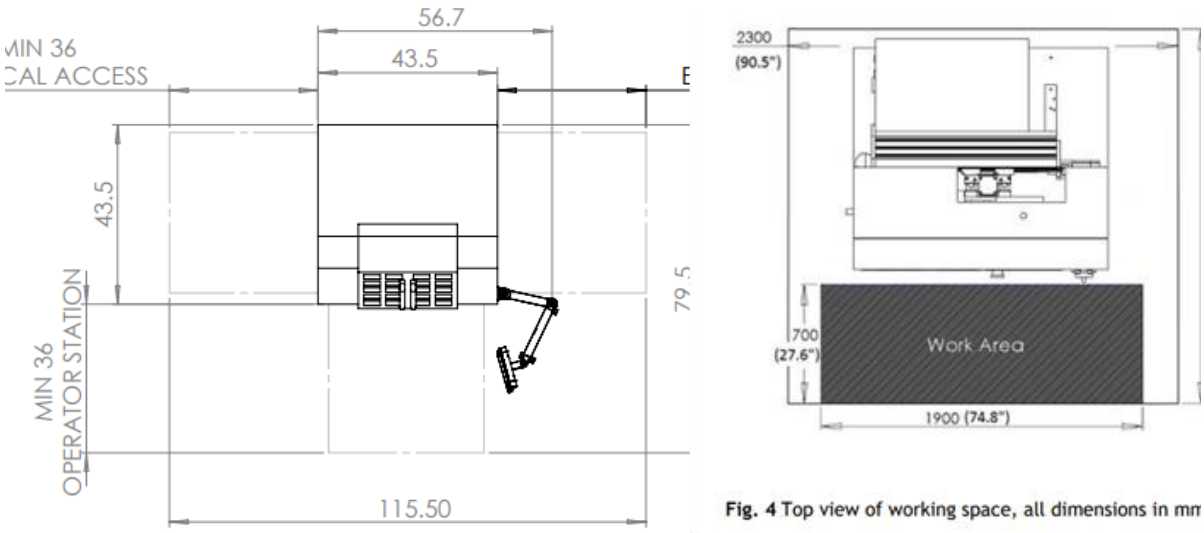


Fig. 4 Top view of working space, all dimensions in mm

MAJOR BENEFITS:

- **Maximize Workspace Efficiency:** Our TensileMill system fits into virtually any environment, sparing you from the constraints of limited space.
- **Reduce Overhead Costs:** Eliminate the need for costly, specialty facilities by integrating our system seamlessly into your existing workspace.
- **Ensure a Safe, Comfortable Environment:** Benefit from low noise levels that enhance laboratory safety and operator comfort.

#5. Low Maintenance Solution and Service Package Options

TensileMill CNC equipment delivers low maintenance, high efficiency, and significant cost savings with user-friendly procedures that keep downtime minimal. Our optimized spare parts and consumables are not only affordable but also readily available directly from TensileMill, ensuring smooth and uninterrupted operations. In addition, our comprehensive service packages go above and beyond by offering Preventative Maintenance, Troubleshooting, and Training Solutions to empower both new and experienced operators, maximizing productivity and prolonging equipment life. For personalized support or to schedule preventative maintenance, please visit: https://www.tensilemillcnc.com/request-support

MAJOR BENEFITS:

- **Minimized Operator Burden:** Our system's truly easy maintenance prevents constant operator involvement and helps you avoid unexpected long-term expenses.
- **Cost Efficiency:** Enjoy significantly lower annual maintenance costs and training / re-training options ensuring long-term savings and operational efficiency.

#6. World-Class Service & Support You Can Rely On

Expert Support You Can Trust: Our highly skilled North American CNC and UTM engineering team ensures you receive expert, low-maintenance equipment support, avoiding the pitfalls of unreliable service and minimizing system disruptions.
Global Network for Swift Resolution: With robust partnerships across North America, Europe, and East Asia, we guarantee prompt and effective **technical support worldwide**, so you can sidestep delays and maintain seamless operations.

Flexible Assistance to Minimize Downtime: Benefit from both remote and in-person support designed to quickly address issues, reducing downtime and keeping your operations running smoothly.

Reliable Accredited Annual Calibrations: Our global calibration services for universal testing equipment, impact testers and hardness testers are performed under **ISO 17025** accreditation and support NADCAP requirements, helping to reduce the risk of measurement errors and compliance issues. Equipment calibration is distinct from laboratory accreditation; accreditation of your laboratory is not included with an equipment purchase.

MAJOR BENEFITS:

- **Expert Support on Demand:** Enjoy prompt and reliable assistance from our qualified North American and European CNC engineering team, avoiding delays and the uncertainty of unqualified service.
- **Flexible Global Service:** Benefit from readily available remote or in-person support worldwide, minimizing operational disruptions regardless of your location.
- **Peace of Mind Anywhere:** Eliminate concerns about system support even when your facility is located overseas, ensuring seamless operations and continuous service.

#7. Standard Warranty and Extended Warranty

When you choose TensileMill CNC Inc., your equipment is comprehensively covered from top to bottom with a robust **12-month standard warranty**. **Complimentary warranty extensions of 24 to 60 months** are available on selected products. Applicable coverage and terms are confirmed in your quotation. Our commitment extends further through the Life-Time Consultation Advantage, providing ongoing technical guidance, troubleshooting and support throughout the lifespan of your equipment. TensileMill always has your back. Flexible warranty options are also available to tailor the protection of your investment to your specific needs.

MAJOR BENEFITS:

Comprehensive Protection: Your equipment is covered from top to bottom with a robust 12-month standard warranty; complimentary extensions of 24 to 60 months are available on selected products, with coverage and terms confirmed in your quotation.

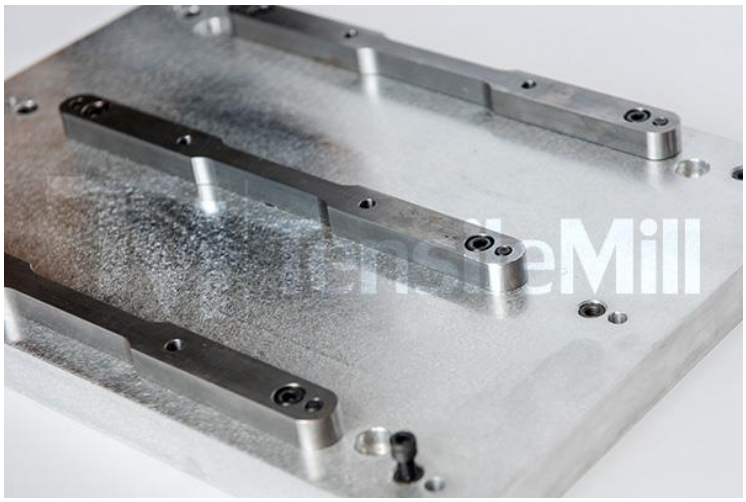
Lifetime Support: Our Life-Time Consultation Advantage guarantees ongoing technical guidance, troubleshooting, and support throughout your equipment's lifespan. TensileMill always has your back.

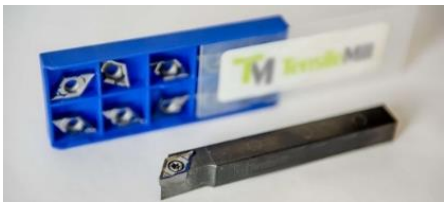
Proven Reliability: For further assurance, request our business reference list featuring clients who have benefited from our warranty and support for over 5 years, so you can gain firsthand insights into our exceptional service.

Flexible Warranty Options: Additional warranty packages are available to tailor the protection of your investment to your specific needs.

#8 Never Stress About the Consumables and Spare Parts

At TensileMill CNC Inc., we ensure that **spare parts and consumables**, including spindle motors, VFD drives, endmills, inserts, fixtures and more, are readily available to minimize downtime. Our comprehensive stock and short lead times, with overnight options when necessary, help you get the parts you need quickly.
Our equipment is designed for operators without prior CNC machining experience, and the supplied tooling is selected around your application. Before purchasing, clients complete an application intake form identifying their materials and specimen preparation requirements; we use it to supply the system with the appropriate turnkey tooling and fixtures selected specifically for those materials and applications. The equipment is compatible with most tooling on the market, so you can keep your existing supplier relationships.
We are committed to a seamless service experience, with spare parts and consumables available for the long term through our **online shop**. This dedication to accessibility and quality ensures that your machine operates efficiently, delivering consistent results.





MAJOR BENEFITS:

Application-Specific Tooling: Included tooling, fixtures and consumables reflect your completed application intake form and quotation, selected for your materials and applications.

Non-Proprietary Parts: Enjoy ultimate peace of mind with parts that work seamlessly with your existing supplier relationships.

Rapid Spare Parts Availability: Benefit from a comprehensive stock and short lead times, including overnight options, to minimize downtime and keep your operations running smoothly.

#9. What Are the Safety Features of TensileMill Systems?

Our tensile sample preparation machines offer comprehensive safety features, with front-access emergency stops, heavy-duty protection covers and fully enclosed systems that prevent operator access during cutting cycles. TensileMill's solutions meet CE, CSA, UL and other certifications upon request, supporting compliance with North America's most rigorous safety inspections, from the automobile and aerospace industries to government R&D facilities.

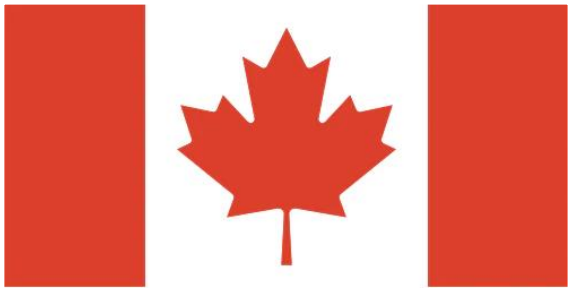
MAJOR BENEFITS:

- **Enhanced Operator Safety:** Fully enclosed systems are designed to reduce the risk of operator injury.
- **Certified Reliability:** Meets CE, CSA, UL, and other stringent safety standards for trusted performance.

NORTH AMERICAN EQUIPMENT

At TensileMill CNC Inc., every machine and consumable is assembled and quality inspected in North America, guaranteeing top-tier manufacturing standards.

Local fulfilment. Clear delivered pricing. For applicable Canadian and US orders, equipment ships from our facility in the destination country. Your quotation confirms delivery arrangements and applicable charges so you can plan your investment with confidence. All systems supplied to Canadian clients come standard with the applicable CSA or UL certification label for use in Canada, addressing the relevant electrical safety requirements.



PROFESSIONAL BUSINESS REFERENCES

OUR CLIENTS

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Logos identify business relationships across flat, round and impact applications. Reference contacts are provided on request and are subject to each client's availability.

[View Business References]

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