TensileMill CNC MICRO – FAQs

1) What are the power and amperage requirements for TensileMill CNC MICRO?

The system operates on a single-phase 220 V power supply and requires approximately 15 amps.

The MICRO tensile and impact specimen preparation machine supports a voltage range of 200–240 V. The unit must not be connected to a 110 V source, as this is below the minimum operating threshold and may prevent components from functioning properly.

2) What type of receptacle would be recommended for the system?

TensileMill CNC MICRO uses a standard 3-prong 20 A receptacle. The system can be connected by simply plugging into the appropriate outlet or hardwiring to a disconnect switch depending on your installation setup.

3) Does the MICRO system require a water connection?

No external water connection is needed. The unit is equipped with an integrated recirculating flood coolant system and a self-contained coolant tank in the base. The spindle is air-cooled, eliminating the need for any water or chiller connection. A pneumatic connection is optional if compressed air is used for cleaning or fixture actuation.

4) What are the space requirements (footprint) for TensileMill CNC MICRO?

The system has a compact design ideal for laboratories.

Approximate machine dimensions: 20.5" × 24" × 59" (52 × 60 × 150 cm).

Since it comes on a mobile stand with an integrated coolant tank, the MICRO fits efficiently within limited lab environments and can be relocated easily when required.

5) What is the suggested cooling fluid to be used with the system?

The MICRO uses a recirculating flood coolant system located inside the machine base. It is recommended to replace or refresh the coolant every 6–12 months depending on usage intensity. The spindle itself is air-cooled and requires no fluid.

Recommended coolant brands include Cim Cool, Hocut, and Blaser, which maintain optimal cutting performance and extend tool life.

6) What is the suggested lubrication fluid to be used with TensileMill CNC MICRO?

The MICRO system operates with precision linear motion and spindle components that require standard lubrication maintenance. The recommended lubricant type is ISO 68 equivalent way lube oil.

This fluid provides smooth axis travel and reduces mechanical wear over time. Common brands such as Mobil, Shell, or Irving are suitable. The lubrication should be checked periodically and refilled as part of regular maintenance.

7) What types of tables and clamping fixtures are included as a turnkey package with the MICRO?

The TensileMill CNC MICRO is supplied with a dedicated flip-jig fixture designed for two-sided machining of flat tensile and impact specimens. The operator clamps the blank once and manually rotates the fixture when prompted by the touchscreen interface. One flip-jig size is included as standard, corresponding to the selected specimen format (4", 8", or 12"). Additional jigs and clamping inserts can be provided to support various standards or custom geometries.

The fixture system minimizes setup time and maintains consistent alignment for accurate, repeatable results.

8) Is it possible to upgrade to the CNC Unlock function after the purchase of the main unit?

Yes. The system can be upgraded to the Carbon interface at any time. This upgrade expands the MICRO's CNC capabilities, allowing for extended machining operations beyond tensile and impact specimen preparation.

Upgrades can be performed remotely with software activation through TensileMill CNC Inc.

9) What are the common consumables for the TensileMill CNC MICRO? Are these readily available?

The MICRO comes equipped with a recommended end-mill selected according to your material type. Since tensile and impact specimens vary by hardness and composition, our engineering team provides tooling recommendations to match your testing materials.

All end-mills are optimized for specimen preparation, offering superior durability compared to general-purpose cutters.

Consumables such as end-mills can be ordered directly from TensileMill CNC Inc. or through your preferred local tooling distributor.

10) What are the common spare parts for MICRO? Are these readily available?

Routine consumables primarily include end-mills and coolant. Under continuous operation, the spindle assembly may eventually require replacement after several years of use, depending on workload intensity.

All major spare parts and consumables are available from TensileMill CNC Inc. inventory or can be shipped within a short lead time.

For assistance or orders, please contact our support team or submit a request online.