TensileMill

Frequently Asked Questions

TensileTurn CNC – Classic Upgrade

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1) What are the power requirements for the TensileTurn CNC – Classic Upgrade Model?

The TensileTurn CNC – Classic Upgrade Model operates on 220 V, single phase (1ph) input power. The machine is rated for 3.5 kW total connected load, including a 2.2 kW main motor and a 40 W coolant pump. Electrical installation should be completed by a qualified electrician with proper grounding and protection in accordance with local electrical codes.

2) Does the TensileTurn CNC – Classic Upgrade Model require an air connection?

Yes. The TensileTurn CNC – Classic Upgrade Model lists pneumatic as a connection requirement. Ensure a suitable pneumatic connection is available at the installation site to support proper machine setup and operation.

3) What are the space, weight, and shipping dimensions for the TensileTurn CNC – Classic Upgrade Model?

The overall machine dimensions are 62.5" × 27.75" × 59.65" (1590 mm × 705 mm × 1515 mm). Shipping/packing dimensions are 72" × 37.2" × 72.65" (1829 mm × 945 mm × 1845 mm). The listed machine weight is 1873 lb (850 kg). The system includes an internal coolant tank with a capacity of 25 L.

4) What type of receptacle/outlet is recommended for the TensileTurn CNC – Classic Upgrade Model?

A grounded 220 V single phase outlet is recommended for the TensileTurn CNC – Classic Upgrade Model. Electrical installation, grounding, and protective requirements should follow your facility standards and local electrical codes, and should be completed by a qualified electrician.

5) Does the TensileTurn CNC – Classic Upgrade Model require a water connection?

The TensileTurn CNC – Classic Upgrade Model is equipped with an internal coolant system. It includes a 25 L coolant tank and a 40 W coolant pump, so coolant is managed through the machine's tank and pump system rather than requiring a facility water line. Coolant levels should be checked regularly as part of normal operation.

6) What types of specimens can the TensileTurn CNC – Classic Upgrade Model prepare?

The TensileTurn CNC – Classic Upgrade Model is designed to prepare round tensile specimens, including standard round tensile specimens, sub-size specimens, threaded tensile specimens, button-head tensile bars, fatigue specimens, and other round testing specimens. The system is also positioned to support preparation of both round and flat tensile specimens, as well as impact samples, using the TensileSoft 2.0 interface and touchscreen setup.

7) What machining operations can be performed on the TensileTurn CNC – Classic Upgrade Model?

The TensileTurn CNC – Classic Upgrade Model supports common CNC machining operations used in specimen preparation, including cutting, sanding, knurling, drilling, facing, and turning. The system is equipped with FANUC software to support CNC control and programming for these operations.

8) What are the maximum starting blank capacity limits for the TensileTurn CNC – Classic Upgrade Model?

Starting blank capacity is listed as 16" long and 2" diameter (406 mm long and 51 mm diameter). The system can accept round, square, or irregular stock, allowing operators to load different stock shapes for specimen preparation.

9) Can the system prepare multiple specimens in one setup?

Yes. The TensileTurn CNC – Classic Upgrade Model can accommodate up to three stacked samples using the triple clamping fixture. It is designed to handle specimens up to 1.5" (45 mm) thick for stacked preparation, supporting repeatable multi-sample runs.

10) What materials and hardness range can the TensileTurn CNC – Classic Upgrade Model handle?

The TensileTurn CNC – Classic Upgrade Model is capable of processing materials up to 55 HRC. This supports tensile specimen preparation for a range of common and higher-hardness materials used in testing labs.

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11) What standards and specimen geometries are available in TensileSoft 2.0, and can users enter custom dimensions?

TensileSoft 2.0 is provided with the TensileTurn CNC – Classic Upgrade Model and runs through a 15" touchscreen controller. Operators can select from pre-loaded standards such as ASTM, ISO, DIN, and others, then choose the required specimen size and geometry from the library. Custom dimensions can also be entered directly using the touchscreen keypad to match internal procedures or special specimen requirements.

12) What controller and CNC software capabilities are included for setup and operation?

The system includes an easy to use touchscreen controller equipped with the complete FANUC software package. Controller features include 64 GB of storage, 4 GB of RAM, WiFi, Ethernet, and USB ports, along with Macro B programming and extensive offset capability with 254 tool offsets and 126 work offsets. It also includes helical interpolation, drilling canned cycles, scaling and mirroring, advanced trajectory planning, and dual mode cutter compensation, and provides access to the MACH4 Industrial CNC Software for professional CNC control functions. Software updates are included at no additional cost.

13) What positioning and repeatability accuracy specifications are listed for the TensileTurn CNC – Classic Upgrade Model?

Position accuracy is listed as X ±0.05 mm, Z ±0.03 mm. Repeat position accuracy is listed as X ±0.02 mm, Z ±0.02 mm. These specifications support consistent specimen preparation to defined dimensions.

14) What tool changer configuration is included?

The tool changer type is listed as electric with 4 tool positions. Maximum tool section is listed as 12 × 12 mm. This configuration supports basic multi-tool specimen preparation workflows.

15) What is included in the Service Plan?

The Service Plan includes regular Preventative Maintenance (PM) intended to reduce downtime, extend equipment life, and maintain testing accuracy. It also includes training and retraining support for quality control teams to help onboard new operators, close skill gaps, and improve preparation consistency. Contact your TensileMill representative to select the plan that best fits your needs.