Future Leading CNC Marble Cutting Machine Solutions from WANLONG for Intelligent Stone Processing

QUANZHOU, FUJIAN, CHINA, September 25, 2026 / EINPresswire.com/ -- Processing delicate natural marble requires extreme mechanical precision, intelligent veining alignment, and zero-backlash blade guidance to prevent edge chipping on fragile luxury slabs. Traditional manual cutting setups rely heavily on operator estimation, leading to material waste, layout mismatches, and micro-fractures along cut seams. To address manual alignment errors and eliminate edge-chipping on high-value stone slabs, Fujian Wanlong Times Technology Co., Ltd. (WANLONG / Wanlong Group) manufactures high-precision intelligent CNC marble cutting machinery equipped with integrated CAD/CAM digital nesting, laser optical alignment, and adaptive feed controls. Operating since 1993, WANLONG integrates heavy-duty monoblock kinematics with specialized diamond tooling to provide automated cutting, 45-degree miter beveling, and contour profiling for dimensional stone fabricators worldwide.



Metric	Unit	CNC-3	CNC-3A
Product type	–	3Axis CNC mono-block bridge cutting machine	3Axis CNC mono-block bridge cutting machine
Application	–	Granite, marble, dekton, ceramic, artificial stone	Granite, marble, dekton, ceramic, artificial stone
Blade diameter	mm	250–400	500–600
Main motor power	kW	11(15)	18.5
Max. cutting size (L × W × H)	mm	3200 × 2000 × 80	3200 × 2000 × 180 (3500 × 2100 × 180 optional)
Max. chamfering size	mm	3200 × 1850 × 80	3200 × 2000 × 180 (3500 × 2100 × 180 optional)
Table dimensions	mm	3200 × 2000	3200 × 2000 (3500 × 2100 optional)
Blade rotation degree	°	0–90	0–90
Blade tilting degree	°	0–45	0–45
Table tilting degree	°	0–85	0–85
Water consumption	m³/h	3	3
Overall dimensions (L × W × H)	mm	5300 × 3000 × 2500	5800 × 3380 × 3200
Approximate weight	kg	3600	4500

Global Industry Trends and Sourcing Dynamics in Intelligent Stone Processing
Founded in 1993 in Quanzhou, China, WANLONG brings over 33 years of advanced machinery and superhard tooling manufacturing experience to global trade. The enterprise operates across two modern industrial parks spanning 64 acres with 40,000 square meters of heavy machinery

facilities. Global stone processing enterprises increasingly require automated CNC machinery to eliminate manual layout errors and optimize material recovery on fragile luxury marbles. WANLONG exports advanced CNC bridge saws and multi-blade machinery to clients in over 180 countries and regions worldwide. This extensive international footprint enables WANLONG to provide tailored machinery solutions that fulfill stringent architectural quality standards across global markets.

Commercial buyers seek machinery partners capable of delivering integrated hardware, software, and tooling solutions under one certified brand. WANLONG maintains an R&D and engineering team of nearly 100 professionals led by distinguished professors and doctoral researchers. This deep engineering foundation allows the enterprise to develop synchronized processing systems that combine rigid machine kinematics with optimized diamond tooling. Direct factory collaboration provides stone producers with transparent production scheduling, dependable global logistics, and stable wholesale equipment pricing. This unified manufacturing approach establishes WANLONG as a trusted partner for modern automated stone fabrication facilities.

Core Operational Principles and Mechanical Architecture of CNC Marble Saws

CNC stone processing operates through multi-axis digital interpolation, coordinating blade motion across natural marble, hard granite, Dekton, porcelain/ceramics, and engineered stone slabs. The mechanical core incorporates an integrated mono-block steel base, eliminating the need for poured concrete foundations and allowing rapid workshop installation or relocation. High-load, dust-protected linear guide rails paired with heavy cast iron crossbeams absorb dynamic cutting stresses to prevent structural deflection during continuous sawing.

For versatile edge profiling, the motorized saw head provides automated 0–90° rotation and 0–45° blade tilting, supported by a laser illumination alignment system. Combined with a hydraulic worktable that tilts up to 85° for safe, crane-assisted slab loading, the machine executes precise orthogonal sizing, bevel miter cuts, and multi-angle chamfering in a single automated clamping cycle.

Intelligent Digital Control, Automated Nesting, and Laser Guidance

Modern CNC marble processing relies on intuitive digital control systems that bridge architectural design and automated factory execution. WANLONG CNC machinery features advanced industrial controllers that support direct importation of standard DXF and DWG CAD drawing files. The onboard CAM software automatically generates optimized toolpaths and calculates tool offset coordinates without requiring manual G-code programming. Integrated digital nesting algorithms simulate blade cut sequences across raw slab photographs, preserving continuous stone veining across adjacent panels. This digital pre-planning optimizes raw material utilization and ensures visual continuity in premium architectural cladding.

High-precision optical laser projection systems project visible alignment lines directly onto the raw marble slab surface. Operators align digital cutting paths visually with natural stone veining, maximizing aesthetic impact and avoiding natural mineral fissures. Real-time camera monitoring systems capture wide-angle video of the working envelope, allowing operators to supervise cutting progress from remote consoles. Variable Frequency Drives (VFD) continuously monitor

spindle load, automatically adjusting feed speed when encountering harder mineral inclusions. This adaptive feed control maintains steady cutting pressure and protects delicate marble edges from micro-chipping.

Cutting Precision, High-Speed Efficiency, and Diverse Application Scenarios

Precision and productivity define the commercial performance of WANLONG intelligent marble cutting machinery. Supported by laser guidance and high-resolution optical encoders, the equipment maintains an exact cutting precision of plus or minus 0.5 mm. When paired with factory-matched WANLONG diamond blades, machines achieve stable continuous feed speeds of seven to nine meters per minute on dense slabs. This rapid processing speed significantly increases daily square meter output while maintaining clean, chip-free edge profiles. Fabricators produce pristine sawn faces that require minimal surface grinding on downstream automated polishing lines.

Intelligent CNC marble saws support diverse architectural and decorative fabrication applications. The equipment executes precise forty-five-degree miter cuts for waterfall kitchen countertops and seamless architectural columns. Five-axis models machine complex circular sink cutouts, curved stair treads, and intricate low-relief wall panels in a single coordinated cycle. Standard straight-line sawing programs process high-volume floor tiles and exterior wall cladding panels with uncompromised dimensional consistency. This versatile processing capability allows stone fabricators to fulfill high-margin bespoke interior projects and large commercial contracts efficiently.

Flexible Factory Configurations and Specialized Tooling Customization

Stone fabrication facilities require equipment configurations tailored to specific workshop footprints, daily output targets, and slab thicknesses. WANLONG provides scalable mono-block machinery architectures to match distinct production envelopes:

CNC-3 Standard Series: Engineered for general slab cutting, accommodating 250–400 mm diamond blades with an 11 (15) kW main motor for cutting depths up to 80 mm on standard 3200 × 2000 mm tables.

CNC-3A Heavy-Duty Series: Configured for thicker workpieces, utilizing an 18.5 kW main drive to power 500–600 mm blades, achieving cutting depths up to 180 mm (with optional 3500 × 2100 mm tables).

A decisive competitive advantage is the seamless synergy between heavy machinery design and specialized diamond tooling formulation. Operating a dedicated stone analysis laboratory, WANLONG evaluates customer stone samples to calibrate custom copper- and cobalt-based diamond blade matrices directly to the machine's motor torque curves, optimizing feed speed and minimizing tooling wear per square meter.

Manufacturing Standards, Turnkey Installation, and Global Lifecycle Support

High manufacturing standards govern every stage of production at WANLONG's 40,000 square meter facility. All machinery manufacturing is certified under the SGS ISO 9001:2015 quality management system, ensuring complete traceability and disciplined assembly protocols. Equipment complies fully with the European Machinery Directive 2006/42/EC, satisfying

harmonized standards EN 12418:2021, EN ISO 12100:2010, and EN 60204-1:2018. WANLONG has been recognized as a National High-Tech Enterprise and recipient of the Second Prize of the National Science and Technology Progress Award. These international accreditations assure buyers that WANLONG equipment satisfies the highest global standards for workplace safety and mechanical reliability.
Dedicated lifecycle support ensures smooth equipment commissioning and long-term production reliability worldwide. WANLONG provides complete turnkey installation services, deploying experienced field engineers to oversee on-site mechanical assembly, wiring, and calibration. Structured operator training programs teach local factory staff CAD file setup, safety protocols, and proactive machine maintenance. IoT-enabled remote diagnostic systems allow factory specialists in China to access CNC interfaces online to troubleshoot issues and optimize cutting parameters in real time. Extensive regional spare parts inventories ensure rapid dispatch of genuine replacement components, linear bearings, and diamond tooling.

Target Buyer Profiles, Commercial Value, and Strategic Partnership
WANLONG intelligent CNC marble cutting solutions deliver substantial commercial advantages to diverse stone processing enterprises. Target clients include architectural stone fabricators, luxury kitchen countertop producers, dimensional stone exporters, and building contractors. Direct factory sourcing eliminates intermediary distribution markups, providing favorable capital acquisition terms for advanced automated machinery assets. Automated CNC precision reduces raw slab waste, accelerates project turnaround times, and elevates finished product quality. These operational gains enable stone fabricators to increase commercial profit margins and strengthen their competitive market leadership.
To download detailed technical specifications for WANLONG CNC marble cutting machines or request a custom workshop layout proposal, visit the official portal at https://www.wanlongtimes.com/. Connect directly with the international engineering division to submit stone testing samples, schedule live virtual machine demonstrations, and receive factory-direct equipment quotations.

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