QUAKELOGIC

DATASHEET

CNC VERTICAL MACHINING CENTER

QL-MillPlus

A heavy-duty precision CNC vertical machining center with FANUC 0i-MF Plus control, 12,000 RPM CAT40 spindle, 30-tool ATC and an integrated fourth-axis rotary system.



SPINDLE SPEED

12,000 RPM

25 HP min., CAT40 / Big Plus

X-AXIS TRAVEL

43.31 in

Y / Z travel 23.62 in

TOOL CHANGER

30 tools

Up to 17 lb per tool

REPEATABILITY

±0.0003 in

X / Y / Z axes

CUSTOMER SATISFACTION 100% GUARANTEED

QuakeLogic Inc. · Roseville, California

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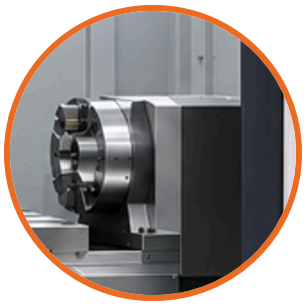
CNC VERTICAL MACHINING CENTER







HEAVY-DUTY PRECISION 4-AXIS MACHINING

The QL-MillPlus is a heavy-duty precision CNC vertical machining center for milling, drilling, tapping, contouring, engraving and simultaneous multi-axis machining. A Meehanite cast-iron base, bed and headstock, hardened and ground roller linear guideways and C3 precision ball screws provide a rigid, stable platform, while a FANUC 0i-MF Plus control, Renishaw probing and 1,000 psi through-spindle coolant deliver production-ready accuracy. The system is supplied and supported by QuakeLogic Inc.

- 12,000 RPM spindle with a minimum 25 HP motor, cooled bearings and CAT40 / CAT40 Big Plus interface handles demanding cutting across a wide range of materials.
- Integrated fourth axis with 8 in, 90° high-speed rotary head, tailstock and six-jaw chuck enables continuous rotary machining in a single setup.
- Renishaw OMP60 workpiece probe and TS27R tool setter automate inspection and tool measurement, reducing setup time and operator error.
- Turnkey delivery with factory-trained installation supervision, ISO/ANSI accuracy testing and two days of onsite operator training.

STANDARD FEATURES »

- FANUC 0i-MF Plus CNC
- 12,000 RPM CAT40 spindle
- 30-tool automatic tool changer
- 4th-axis rotary head
- 8 in six-jaw chuck & tailstock
- Renishaw OMP60 probe
- Renishaw TS27R tool setter
- 1,000 psi through-spindle coolant
- Automatic chip conveyor
- Coolant mist collector
- Oil skimmer & wash gun
- Automatic lubrication
- Standard tooling package
- Leveling & floor hardware
- Manuals & schematics

KEY FEATURES

- Meehanite cast-iron base, bed and headstock deliver high rigidity and vibration damping for heavy cutting and long-term accuracy.
- Hardened and ground roller linear guideways with C3 precision ball screws and protective covers on all three linear axes.
- Cooled spindle bearings, automatic air blast at tool change and through-spindle air support stable, clean high-speed machining.
- 30-position ATC accepts tools up to 17 lb, 3 in × 11 in with adjacent pockets occupied and 6 in diameter with adjacent pockets empty.
- FANUC 0i-MF Plus control with conversational programming, helical interpolation, Custom Macro B, rigid tapping and toolpath simulation.
- High-speed machining, 3D contouring and engraving with simultaneous all-axis control and AC digital servo and spindle drives.
- X/Y/Z repeatability of ±0.0003 in and positioning accuracy of ±0.0003 in / 12 in, with thermal expansion countermeasures.
- 1,000 psi high-pressure coolant, shower coolant, chip air blower, mist collector and oil skimmer keep the work zone and parts clean.
- DNC and Ethernet connectivity with Wi-Fi removed or disabled, suiting secure and controlled facility networks.

PRODUCT FEATURES

Machine Structure

Meehanite cast-iron base, bed and headstock · Hardened and ground roller linear guides · C3 precision ball screws · Three-axis protective covers

Spindle

12,000 RPM maximum · 25 HP minimum motor · CAT40 / CAT40 Big Plus · Cooled bearings · Through-spindle coolant and air

Tool Changer

30-position ATC · 17 lb maximum tool weight · Automatic air blast at tool change

Fourth Axis

8 in, 90° high-speed rotary head · 8 in six-jaw chuck · Tailstock included

CNC Control

FANUC 0i-MF Plus · 15 in color LCD · 32 MB program memory · 256 MB data server · Manual pulse generator

Probing

Renishaw OMP60 workpiece probe · Renishaw TS27R automatic tool setter

Electrical

480 V, three-phase, 60 Hz compatible

For more information about the features, specifications and available configurations of the QL-MillPlus, please contact QuakeLogic.

SYSTEM CONFIGURATION

COMPONENT	CONFIGURATION
Machine Type	CNC vertical machining center
Construction	Meehanite cast-iron base, bed and headstock
Spindle	12,000 RPM, 25 HP min., CAT40 / CAT40 Big Plus
Tool Changer	30-position automatic tool changer
Fourth Axis	8 in, 90° rotary head, 8 in six-jaw chuck, tailstock
CNC Control	FANUC 0i-MF Plus with 15 in color LCD
Probing	Renishaw OMP60 workpiece probe, Renishaw TS27R tool setter
Coolant & Chips	1,000 psi through-spindle coolant, automatic chip conveyor

MACHINING CAPABILITY

SPECIFICATION	VALUE
X / Y / Z Travel	43.31 / 23.62 / 23.62 in
Worktable Size	47.24 × 23.62 in
Table Load Capacity	1,764 lb
Maximum Spindle Speed	12,000 RPM
Maximum Tool Weight	17 lb
Maximum Tool Size	3 in Ø × 11 in (adjacent occupied) · 6 in Ø (adjacent empty)
X / Y / Z Repeatability	±0.0003 in
X / Y / Z / A Positioning Accuracy	±0.0003 in / 12 in

INCLUDED SERVICES

INSTALLATION SUPERVISION

Factory-trained personnel supervise positioning, leveling, electrical verification, CNC configuration, ATC setup and fourth-axis integration.

COMMISSIONING & ACCURACY TESTS

Onsite functional verification and accuracy testing to applicable ISO/ANSI standards, covering spindle, axes, ATC, probing and safety systems.

OPERATOR TRAINING

Two days of onsite training: safety, CNC operation, programming, tool setup, fourth-axis machining, inspection and maintenance.

WARRANTY & SUPPORT

24-month warranty with onsite service response within 36 hours and replacement parts delivery within 48 hours.

TECHNICAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
MACHINE AND TRAVEL	
Brand / Model	QuakeLogic / QL-MillPlus
Machine Type	CNC vertical machining center
Construction	Meehanite cast-iron base, bed and headstock
Linear Guideways	Hardened and ground roller linear guides
Ball Screws	C3 precision grade
X / Y / Z Travel	43.31 / 23.62 / 23.62 in
Worktable	47.24 × 23.62 in
Table Capacity	1,764 lb
X / Y / Z Repeatability	±0.0003 in
X / Y / Z Positioning Accuracy	±0.0003 in / 12 in
A-Axis Positioning Accuracy	±0.0003 in / 12 in
SPINDLE AND TOOLING	
Spindle Speed	12,000 RPM maximum
Spindle Motor	25 HP minimum
Spindle Interface	CAT40 / CAT40 Big Plus
Spindle Bearings	Cooled
Automatic Tool Changer	30 tools, automatic air blast
Maximum Tool Weight	17 lb
Fourth Axis	8 in, 90° high-speed rotary head
Rotary Chuck / Tailstock	8 in six-jaw chuck / included
Retention Knobs	Included

SPECIFICATION	DESCRIPTION
CNC CONTROL AND PROBING	
CNC Control	FANUC 0i-MF Plus
Display	15 in color LCD
Program Memory / Data Server	32 MB min. / 256 MB min.
Programming	Conversational, Custom Macro B, helical interpolation
Machining Functions	High-speed machining, 3D contouring, engraving, rigid tapping
Connectivity	DNC, Ethernet; Wi-Fi removed / disabled
Workpiece Probe / Tool Setter	Renishaw OMP60 / Renishaw TS27R
COOLANT AND WORK ZONE	
High-Pressure Coolant	1,000 psi through-spindle
Coolant Accessories	Shower coolant, mist collector, oil skimmer
Chip Removal	Automatic chip conveyor, chip air blower
Enclosure	Fully enclosed, removable splash guards
PHYSICAL AND SERVICE	
Electrical Supply	480 V, three-phase, 60 Hz
Machine Dimensions	Approx. 190 × 89.76 × 100.4 in
Machine Weight	Approx. 14,000 lb
Documentation	English manuals and schematics, hard copy and digital
Training	Two days onsite operator training
Warranty	24 months

Images are representative. Specifications describe the standard QL-MillPlus configuration. FANUC and Renishaw are trademarks of their respective owners.

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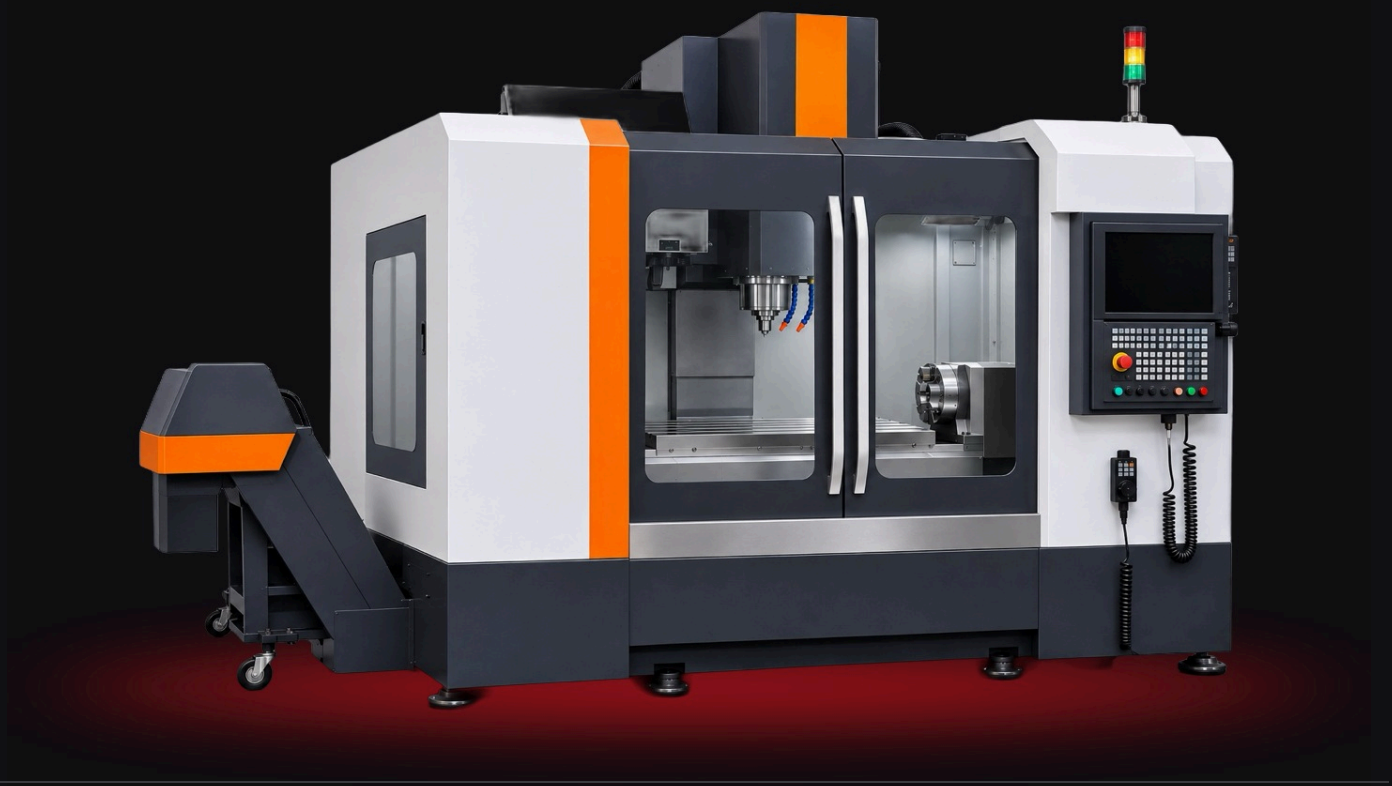
QL-MILLPLUS · CNC VERTICAL MACHINING CENTER



CORPORATE HEADQUARTERS

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CONTACT

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VIEW PRODUCTS

COMPANY CERTIFICATIONS

ISO 9001:2015

Quality Management

Cert. No. AQUS-10006

ISO 14001:2015

Environmental Management

Cert. No. AQUS-20002

ISO 45001:2018

Occupational Health & Safety

Cert. No. AQUS-30002

ISO/IEC 27001:2022

Information Security

Cert. No. ICB.90238.ISO.56838

QuakeLogic Inc. is a California-based engineering and technology company, certified at company level to the standards above. The QL-MillPlus is supplied and supported by QuakeLogic Inc.

CUSTOMER SATISFACTION · 100% · GUARANTEED