

# QL-Axis-Compact – 3-Axis Vertical Machining Center

Engineered for high-accuracy metal cutting, prototyping, and small- to medium-batch production, the **QuakeLogic QL-Axis-Compact** delivers reliable, repeatable performance in a compact footprint.

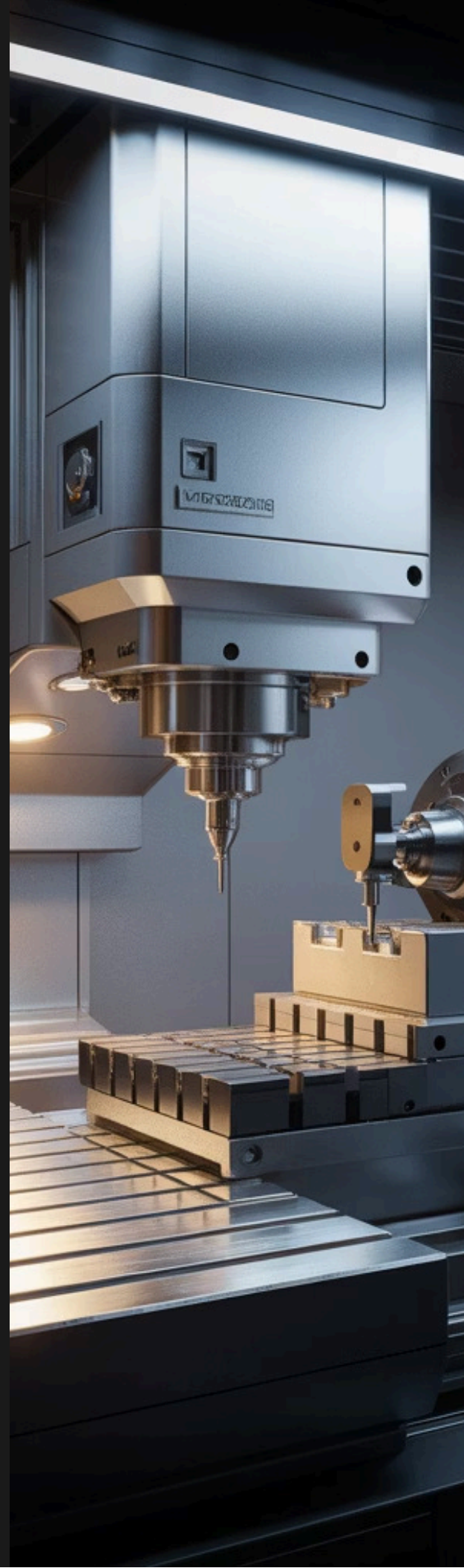
Built on **Hiwin linear guideways** and powered by a **Siemens SINUMERIK 828D** CNC control, it ensures exceptional precision and machining efficiency for demanding applications across aerospace, automotive, tooling, and research industries.

**Precision.**

**Performance.**

**Productivity.**

 **QUAKE**LOGIC



# Advanced Control Technology

At the core of the QL-Axis-Compact is the **Siemens SINUMERIK 828D Touch CNC** system—an intuitive, high-performance interface offering advanced tool-path control, real-time diagnostics, and seamless program execution. Operators benefit from a clear touchscreen HMI and integrated safety and calibration tools for optimal workflow efficiency.

## Key Performance Specifications

Parameter	Specification
CNC Control Interface	Siemens 828D Touch System
Axis Configuration	3-Axis (X, Y, Z)
Spindle Taper	BT40
Spindle Speed	8000 rpm (belt-drive)
Main Motor Power	5.5 kW
Table Size	800 × 400 mm
X/Y/Z Travel	650 / 500 / 500 mm
Max. Table Load	400 kg
Feed Rate (Cutting)	1 – 8000 mm/min
Rapid Traverse (X/Y/Z)	24 / 24 / 24 m/min
Positioning Accuracy	± 0.005 mm
Repeatability	± 0.003 mm
Machine Weight	3800 kg
Dimensions (L × W × H)	4100 × 2250 × 2530 mm



## Physical Specifications

<b>Length</b> 4100 mm	<b>Width</b> 2250 mm
<b>Height</b> 2530 mm	<b>Weight</b> 3800 kg

## Precision & Construction

1

### Hiwin C3-Grade Ball Screws & Linear Guides

For ultra-smooth motion and superior accuracy.

2

### Fully Enclosed Splash Guard

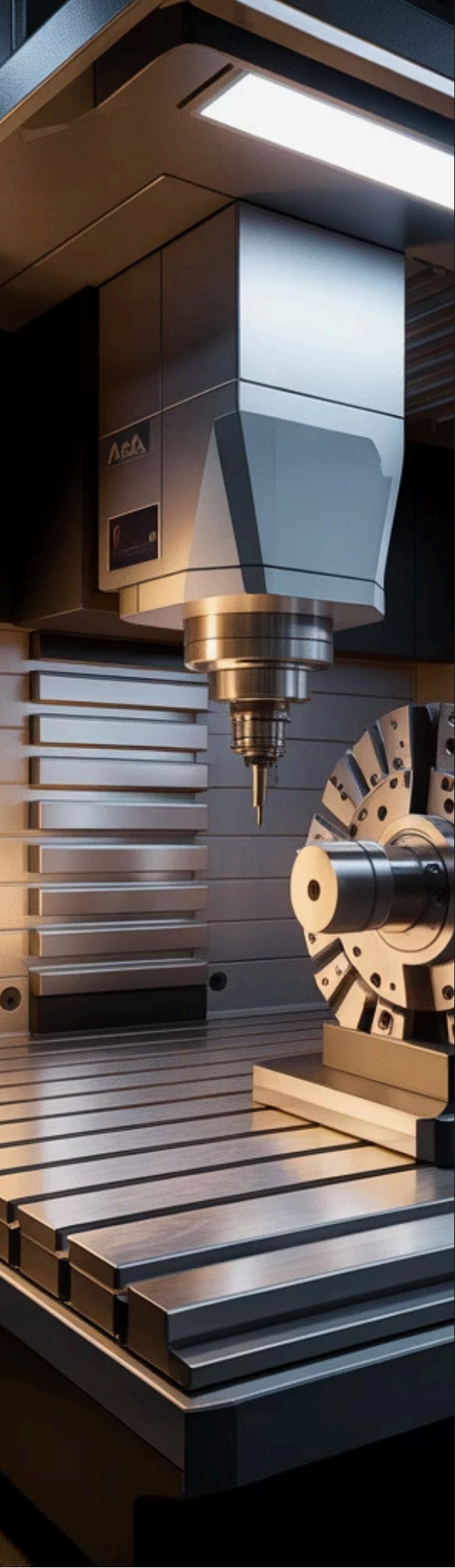
Protects the operator and ensures a clean machining environment.

3

### Integrated Telescopic Covers

Shield guideways and screws from contamination.

- **Cast-Iron Bed Structure** – Delivers vibration damping and thermal stability.
- **Renishaw TS27R Tool Setter + OMP40 Probe** – Automated calibration and workpiece inspection.



# System & Utility

## Automatic Lubrication & Cooling

A closed-loop lubrication system ensures precise oil distribution, while an advanced coolant circuit maximizes chip evacuation efficiency.

## Pneumatic and Electrical Systems

Equipped with **AirTAC/Mindman** pneumatic components and **DELIXI** electrical systems for durability and service reliability. Includes 3-color status indicator light, air cleaning gun, and electrical cabinet heat exchanger.

# Work Environment and Safety

- LED Work Light for optimal visibility
- Door interlock system (optional power-off safety)
- Stable leveling pads and anchor bolts
- Air-blow and coolant nozzles for tool and work surface cleaning





## Standard Included Accessories



**Siemens 828D Touch CNC System**



**16-Tool Hat-Type ATC**



**BT40 Spindle Unit (8000 rpm)**



**Renishaw TS27R Tool Setter &  
OMP40 Probe**



**Automatic Lubrication System**



**Pneumatic System with Air Gun**



**Work Cooling and Lighting System**



**Heat-Exchanged Electrical  
Cabinet**



**Leveling Pads and Bolts**



**Tool Change Button & Manual  
Pulse Generator**

# Optional Accessories

## Automatic Chip Conveyor

Bucket type chip evacuation system

## 5th Axis Add-On

For complex 5-axis operations

## Through-Spindle Coolant

Integrated coolant delivery for deep drilling

## 24-Position Disc ATC

Expanded automatic tool capacity

## Clamping Kits & Vices

For fixture setup flexibility

## 4th Axis Rotary Table

Enables multi-face machining

## High-Speed Spindle

10,000 / 12,000 rpm spindle upgrade

## Oil Cooler & Water Separator

Thermal stabilization & fluid quality control

## Workpiece Measuring System

Renishaw / Domestic option

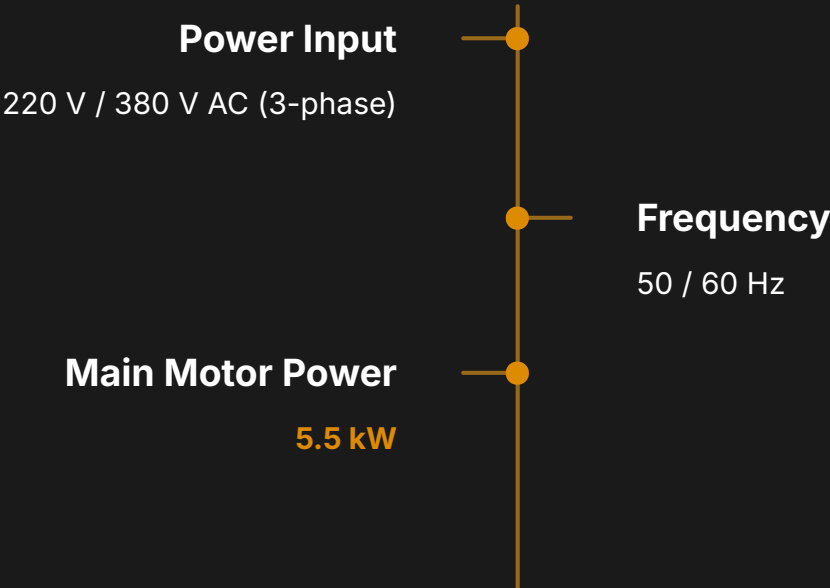


# Integrated Component Manufacturers

CNC Controller	Siemens 828D
Linear Guideways & Ball Screws	HIWIN
Tool Magazine	OKADA / AIMACH
Spindle Unit	ABIG / CELL

Pneumatics	AirTAC / Mindman
Lubrication System	HEGU / CNP
Bearings	NSK / SKF / NACHI

## Electrical & Power



Specification	Detail
Control System Power	Siemens 828D Touch HMI (LAN / USB)
Cooling System	Forced-air heat exchange cabinet

# Applications



**Aerospace & Defense Component Fabrication**



**Precision Tooling & Fixture Manufacturing**



**University Research & Engineering Laboratories**



**Automotive Prototyping & Production Runs**

# Warranty & Support

## Two-Year Warranty

Covers core mechanical and electrical components.

## Remote Technical Assistance

Real-time support and software updates.

## On-Site Implementation and Training

For setup and operator certification.





1

## PRODUCT OVERVIEW

**Achieve unmatched machining accuracy with the QL-Axis-Compact.**

Designed for precision, built for endurance — engineered by **QuakeLogic**.



## QuakeLogic Inc.

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Live Datasheet

