

# 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.

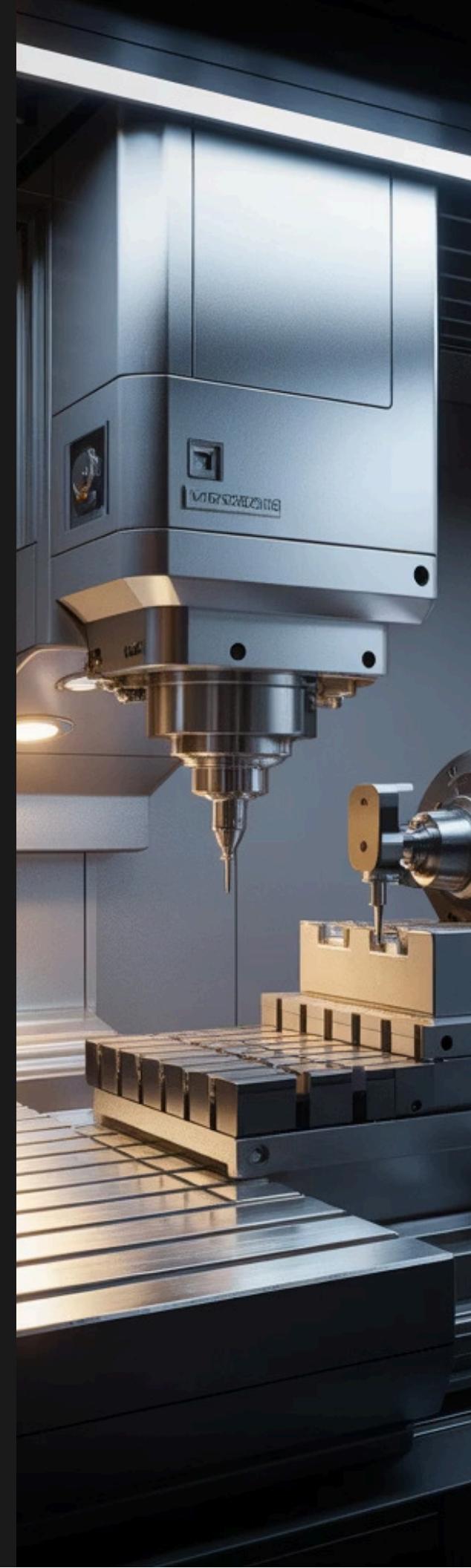
Built on **Hiwin linear guideways** and powered by a **Siemens SINUMERIK 828D** CNC control, it ensures exceptional precision and machining efficiency for demanding applications across aerospace, automotive, tooling, and research industries.

Precision.

Performance.

Productivity.

 **QUAKELOGIC**



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

# Precision & Construction



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

For ultra-smooth motion and superior accuracy.

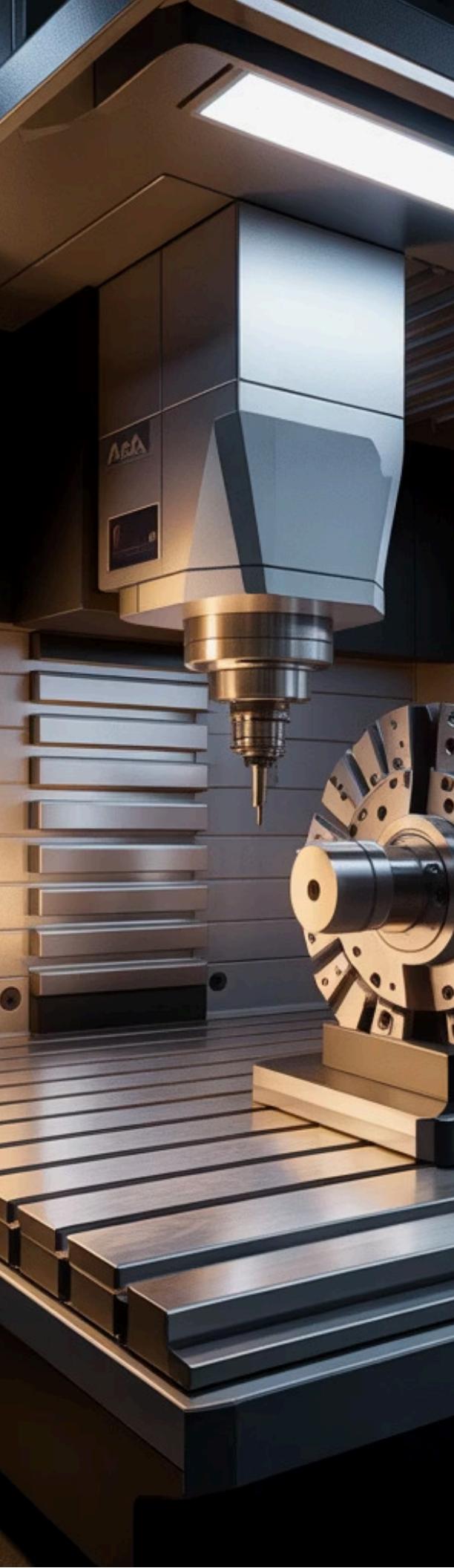
## 2 Fully Enclosed Splash Guard

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

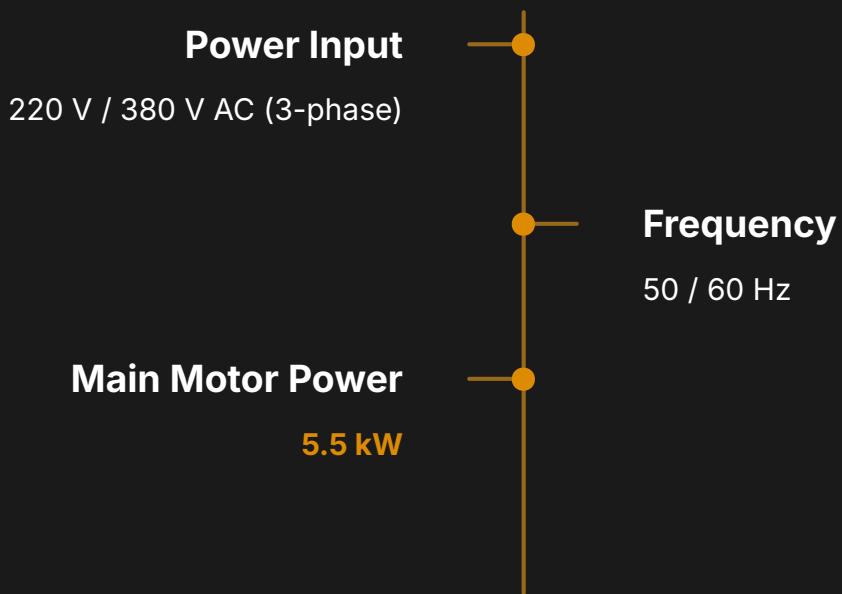
Renishaw / Domestic option



# Integrated Component Manufacturers

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

## 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**



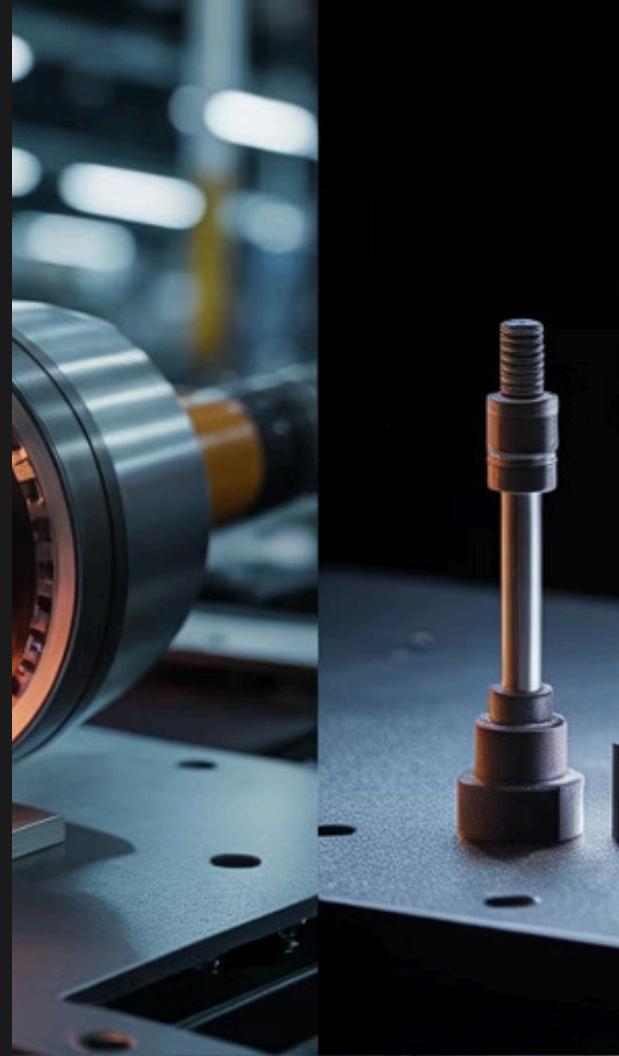
**Precision Tooling & Fixture Manufacturing**



**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.



## 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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