

# S510

## Dry Milling Machine

Precision, Efficiency, Reliability



# GERMAN-MADE Spindle



**No air compressor needed**  
The spindle does not require air



### 5-Axis Milling

Achieve unparalleled precision with our advanced 5-Axis milling technology. The S500 ensures meticulous detail and perfect results, every time.



### Auto-Calibration

Say goodbye to complex and time-consuming calibration. Our streamlined auto-calibration process saves you time and simplifies your workflow, allowing you to focus on what truly matters.



### 8-Inch Touch Display

Navigate through intuitive workflows effortlessly on the high-resolution 8-inch touch display. No need for a computer—just plug in a flash drive and get started immediately.



### High-Performance

The integrated 12-tool gauge delivers lightning-fast manufacturing, ensuring a seamless and efficient production experience.



### Robust Cast Aluminum Body

Constructed with cast aluminum, the S500 minimizes vibrations and enhances stability, providing reliable performance even for the most demanding tasks.



### Versatile Connectivity

Connect effortlessly via the RJ45 connector for remote control or integrate with a vacuum cleaner for automatic cleaning. The S500 adapts to your needs, enhancing your operational efficiency.

## Specifications

Basic Information	
Method	Dry milling
Material	Zirconium, wax, PMMA, composite material and soft metal size:98.5mm Secondary clamp(optional)
Structure	Solid cast aluminum body
Case	Steel plate, medical white high-gloss paint, working hatch, accessory drawer
Axis	5 axis
Linear axis X/Y/Z	Precision ball screw, precision guide rail, repeat accuracy $\pm 5\mu\text{m}$ precision motor travel, X/Y/Z: 176/134/100mm
Axis of rotation A/B	Precision motor, precision harmonic reducer, repeat accuracy $\pm 0.01^\circ$ A axis: $\pm 32^\circ$ B axis: $\pm 360^\circ$
Control system	Integrated FPGA high-speed parallel processing command, equipped with a real-time operating system that supports standard G command (RS274X) and extended commands. Integrated frequency converters for synchronous and asynchronous motors, make it more flexible and more compatible. Support multiple analog and digital IO.
LED	Multiple LED color indicator Ready&Milling (White) Finished milling(Green) / Error(Red)
Spindle	
Regular	High-frequency asynchronous spindle, tool change without air (do not rotate during tool changing).
Rotate speed	Maximum 60,000 rpm
Power	800W(S5, Pmax), 450W(S1)
Bearing	High speed ceramic ball bearings, Eccentricity<3um
Chuck	Suitable for Shank diameter 4mm, 50mm length milling burs

Milling	
Tool library	12 tools, Integrated tool gauge
Conditions	
Power supply	100-120VAC, 200-240VAC, two types switchable, 50-60Hz
Data interface	RJ45 Ethernet interface, 10/100M self-adaptive, required for networking.
Temperature	10-45° C
Humidity	80% relative humidity, non-condensing
Certification	
CE & FCC	
Size & Weight	
Product Size	L*W*H 495mm*593mm*627mm
Product Weight	71 kg
Package Size	L*W*H 730mm*620mm*900mm
Package Weight	94Kg
Accessories	
CAM	Support Millbox, Hyperdent, WorkNC and GO2CAM.