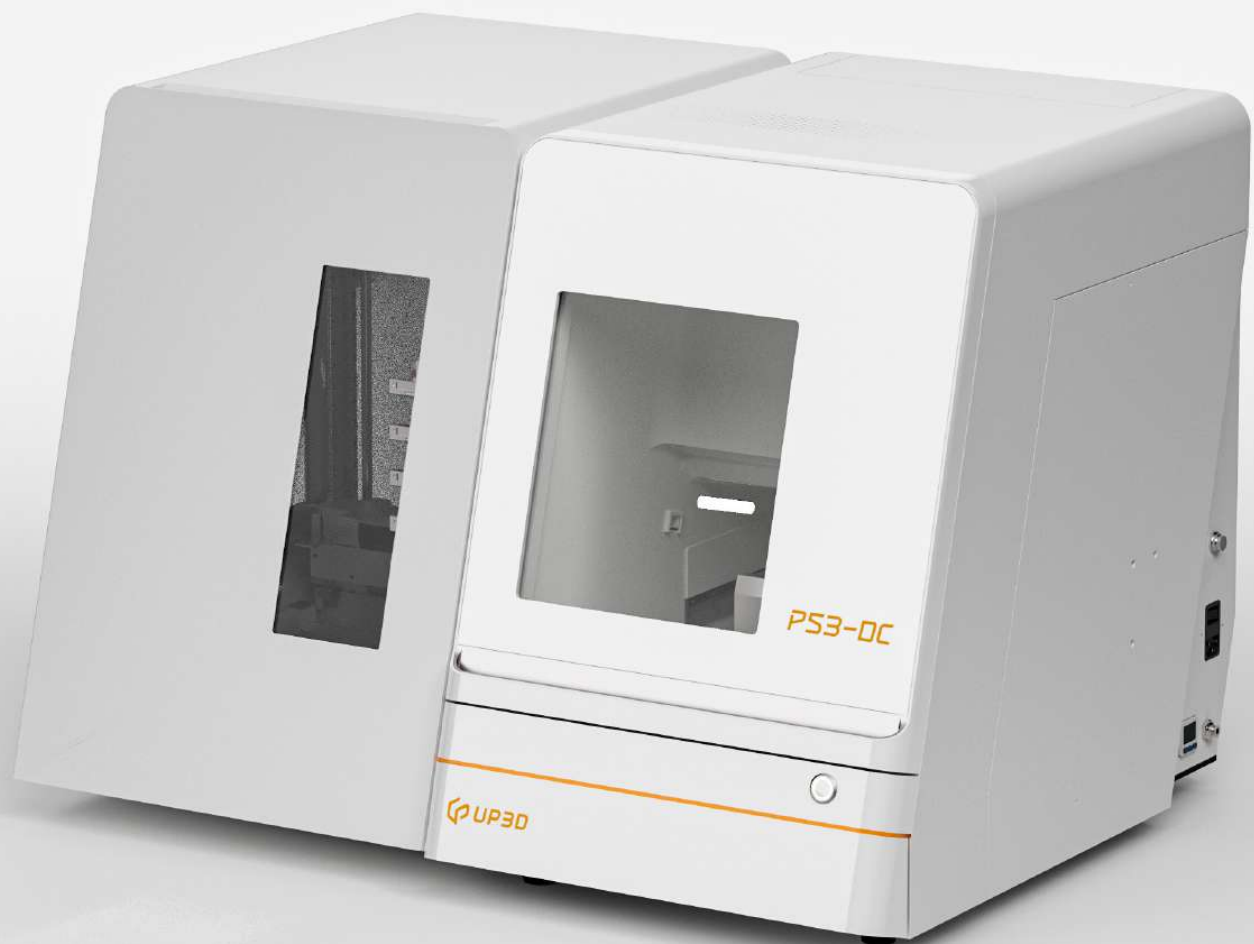




# 5-AXIS DENTAL MILL WITH AUTOMATIC DISC CHANGER

24-Hour Unattended Automatic  
Milling for a More Hassle-Free  
Processing Experience





UP3D is a high tech company and the few companies in the world that are capable of developing a full dental CAD/CAM solution including software and hardware, from scanning, designing, to milling.

UP3D remains dedicated to our customers' requirements for training and support as well as for innovative, high-quality products that perform reliably. We have native technical support to deal with any after-sales problems to ensure that you can use our products happily.

# Becoming the Global Leader in an Exceptional Digital Dental Ecosystem

**120+**

Countries and regions served

**11,000+**

Equipment installations worldwide

**200+**

R&D engineers

**35%+**

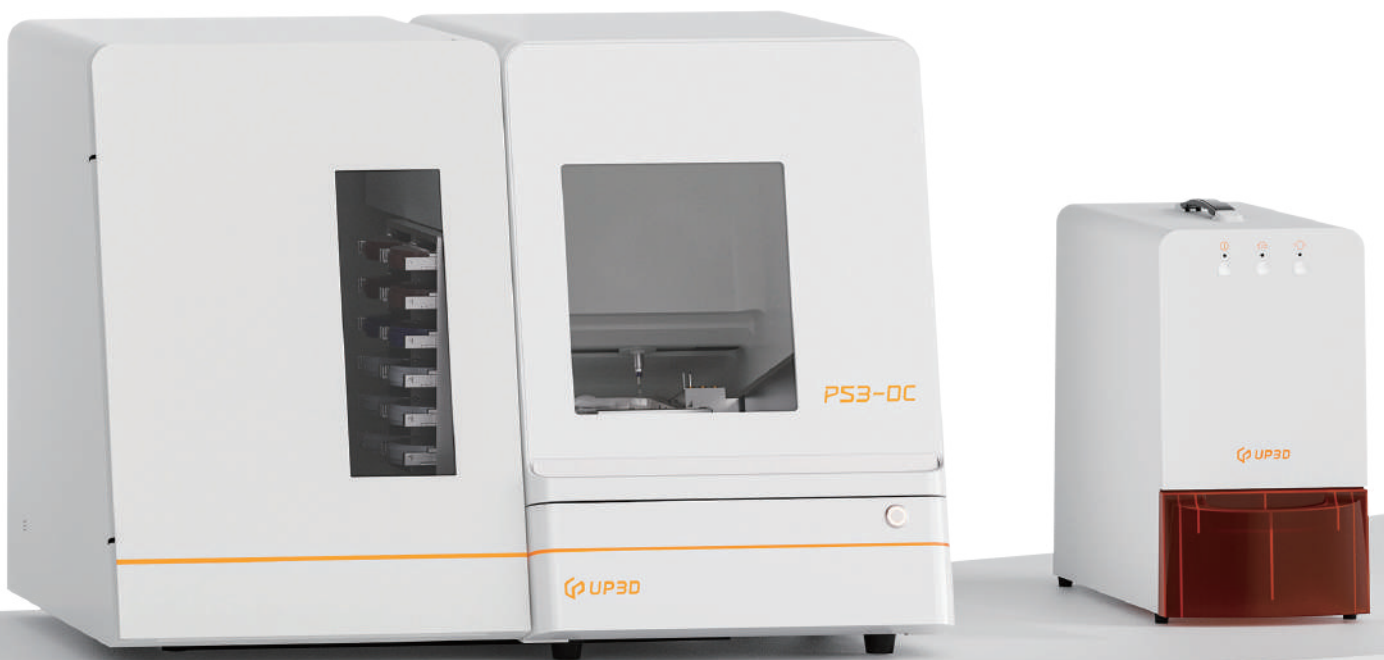
High investment in R&D

# Superior Milling Efficiency First

**P53DC** - Five-Axis Automatic Disc Changing Intelligent Milling Machine integrates a 12-slot disc design for uninterrupted 24-hour automatic material and tool switching, ensuring stable production even in unmanned dental laboratories. Equipped with the custom BK-1 clamp for instant switching between disc and block materials, it combines 90° vertical aesthetic processing with a 0.3mm micro-carving milling cutter for efficient and precise dental restorations. Smart remote operation and negative ion cleaning technology further enhance the user experience and workplace environment, offering a comprehensive, efficient, and economical dental restoration solution to boost dental laboratory production capabilities comprehensively.

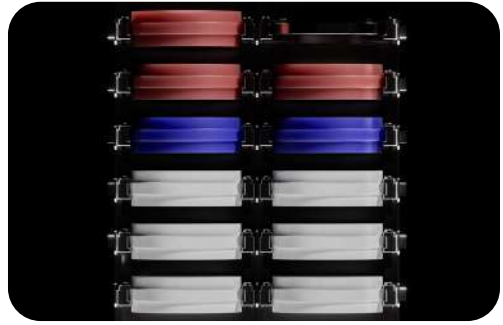


# FREE YOUR HANDS UNLOCK MORE POSSIBILITIES



## Round-the-Clock Automatic Material Change, Large Capacity Material Library Comprehensive Boost in Production Efficiency

Featuring an integrated automation system and a 12-fold large capacity material library for automatic material switching during machining, it enables 24/7 continuous and efficient milling. Advanced RFID technology combined with a smart robotic arm ensures precise material changes every time, elevating production efficiency and stability to new heights.



## Compatibility with Multiple Materials, Instant Material Switching Machining Made More Efficient and Effortless

Supports a variety of materials including "zirconia, wax, PMMA, PEEK, cobalt-chromium soft metal, and composite resin," equipped with the custom BK-1 clamp for instant switching between disc and block materials. Effortlessly handles multitasking for efficient processing.



## 90° Precision Milling Efficient and Realistic Restoration

The Intelligent five-axis synchronous technology supports 90° vertical aesthetic processing. Combined with a 0.3mm micro-carving milling cutter, it integrates precise milling with efficient, realistic restoration to ensure high-quality outcomes.



## Smart Remote Operation Boosting Productivity and Efficiency

Remote control through Millmind software, along with smart milling reminders and tool life monitoring, effectively supervising production status and significantly boosts production efficiency.





## Negative Ion Generator Optimized Cleaning Efficiency

Integrates negative ion technology to significantly reduce static from resin debris, enhancing cleaning efficiency. This creates a tidy work environment and fosters a comfortable machining experience.

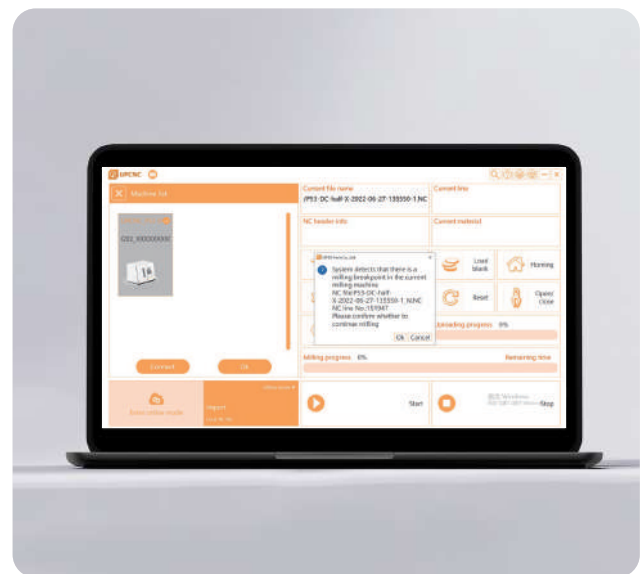


## 01. Automatic Tool Change Device Enables Continuous Production

Equipped with a tool library of 11 tools, it ensures continuous milling of different materials without halting production, significantly enhancing production efficiency, processing precision, and stability while reducing maintenance costs.

## 02. Resume from Breakpoint Significantly Enhanced Efficiency

The software can automatically continue milling from the last interrupted step, avoiding repeated milling and improving work efficiency by at least 80%.



## 03. Tool Life Display Ensuring Normal Production

Integrated with UPCAM to automatically calculate tool wear, planning the usage cycle of the tool wisely to reduce the risk of porcelain breakage and processing failures.

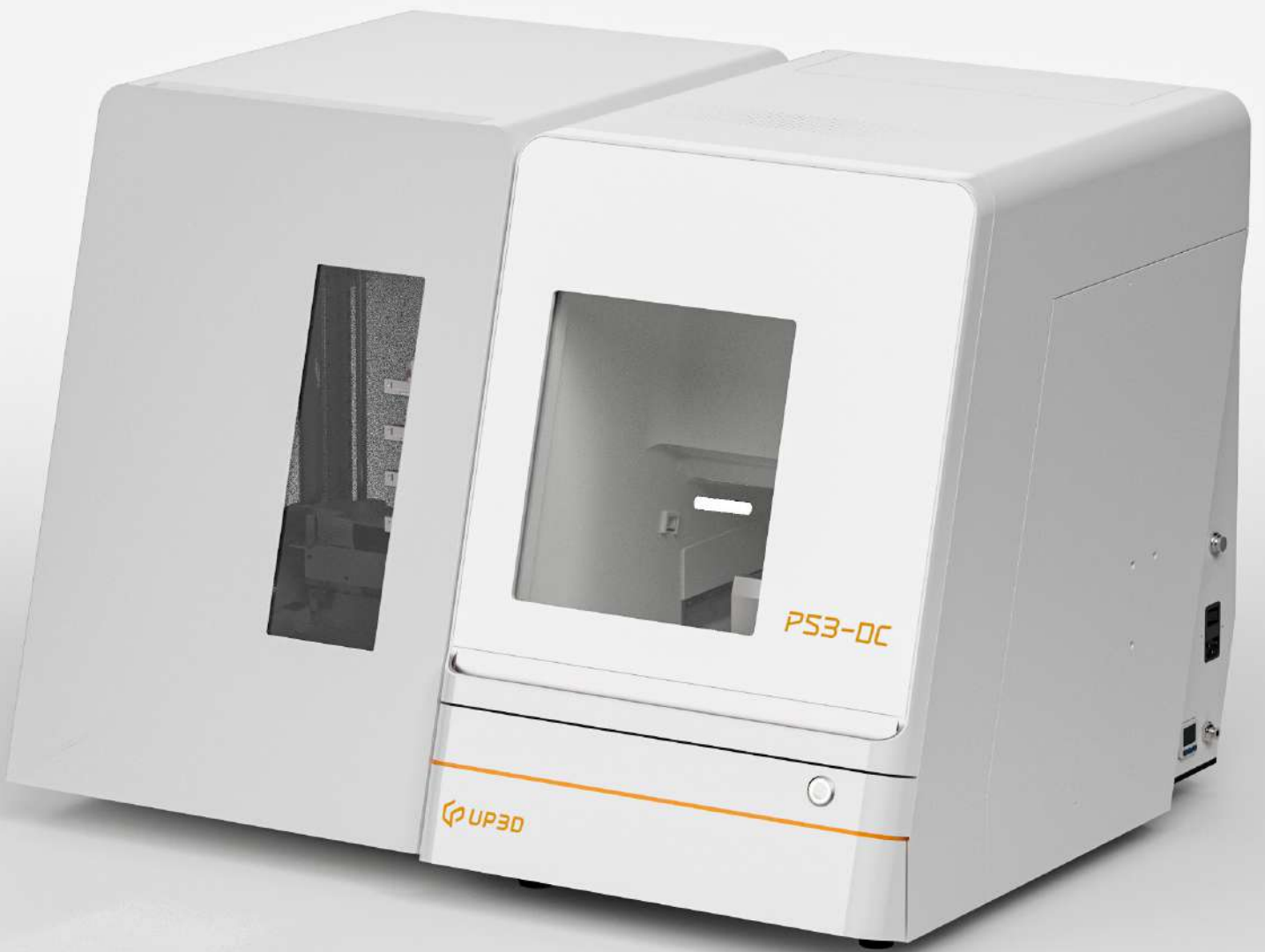
## 04. Dust-Proof Slide Design Enhanced Lifespan

Innovatively restructured with dust-proof slide technology, it effectively isolates dust, reduces maintenance needs, and significantly prolongs the machine's lifespan. Enjoy a more efficient and durable machining experience.

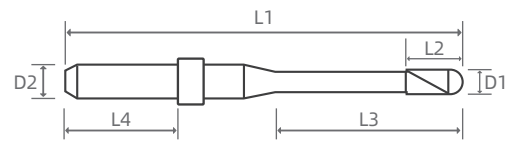
## Technical Specifications

P53DC	
Dimensions	720×875×630 (mm)
Weight	130 Kg
Input Voltage	AC 100-240V
Maximum Power	1.1KW
Spindle Power	0.35KW (max)
Number of Axes	Five-axis simultaneous
Milling Range	X/Y/Z:167/200/90mm, A:±30°B:±360°
Milling Type	Dry milling
Max Spindle Speed	40,000rpm
Max Feed Rate	3000mm/min
Tools Quantity	11
Disc Library Quantity	12
Tool Change Method	Automatic (air pressure > 0.35MPa)
Spindle Cooling	Compressed air (air pressure 0.15~0.20MPa)
Materials	Zirconia, wax, PMMA, PEEK, cobalt-chromium soft metal, composites
	Coping: Zirconia 10 minutes, Wax 4.5 minutes
Milling Time	Full crown: Zirconia 13 minutes, Wax 5.5 minutes
Material Size	Discs: height 10-30mm, diameter 98mm
	Blocks up to 40×20×20mm
Spindle Clamping Diameter	Φ4.0mm
CAM Support	UPCAM, Millbox
Data Transmission	Network interface





## • Applicable Materials



### ● ZIRCONIA (ZrO2)

Tool Name	Tool Type	Tool Coating	D1 (mm)	D2 (mm)	L3 (mm)	L4 (mm)	L1 (mm)
Zirconia DC Burs	double tooth radius cutter	diamond	2.0	4.0	16.0	18.0	50.0
Zirconia DC Burs	double tooth radius cutter	diamond	1.0	4.0	16.0	18.0	50.0
Zirconia DC Burs	double tooth radius cutter	diamond	0.6	4.0	8.0	18.0	50.0
Zirconia DC Burs	double tooth radius cutter	diamond	0.3	4.0	4.0	18.0	50.0
Zirconia DLC Burs	double tooth radius cutter	+	2.0	4.0	16.0	18.0	50.0
Zirconia DLC Burs	double tooth radius cutter	+	1.0	4.0	16.0	18.0	50.0
Zirconia DLC Burs	double tooth radius cutter	+	0.6	4.0	8.0	18.0	50.0
Zirconia DLC Burs	double tooth radius cutter	+	0.3	4.0	4.0	18.0	50.0
Zirconia DLC Flat Burs	double tooth Flat radius cutter	+	1.0	4.0	16.0	18.0	50.0
Zirconia DC Burs Extended	double tooth radius cutter Extended	diamond	2.0	4.0	20.0	18.0	50.0
Zirconia DC Burs Extended	double tooth radius cutter Extended	diamond	1.0	4.0	20.0	18.0	50.0
Zirconia DLC Burs Extended	double tooth radius cutter Extended	+	0.6	4.0	14.0	18.0	50.0

### ● WAX AND PLASTICS (PMMA)

Tool Name	Tool Type	Tool Coating	D1 (mm)	D2 (mm)	L3 (mm)	L4 (mm)	L1 (mm)
PMMA/Wax single flute Burs	single tooth radius cutter	-	2.0	4.0	16.0	18.0	50.0
PMMA/Wax single flute Burs	single tooth radius cutter	-	1.0	4.0	16.0	18.0	50.0
PMMA/Wax single flute Burs	single tooth radius cutter	-	0.6	4.0	8.0	18.0	50.0

### ● COMPOSITES

Tool Name	Tool Type	Tool Coating	D1 (mm)	D2 (mm)	L3 (mm)	L4 (mm)	L1 (mm)
Composite DC Burs	double tooth radius cutter	diamond	2.0	4.0	16.0	13.0	40.0
Composite DC Burs	double tooth radius cutter	diamond	1.0	4.0	16.0	13.0	40.0
Composite DC Burs	double tooth radius cutter	diamond	0.6	4.0	8.0	13.0	40.0

# - Restoration Types/Materials

	 Zirconia	 PMMA	 PEEK	 Composite Resin
 Coping/Full Crown	✓	✓	✓	✓
 Three-Unit Bridge	✓	✓	✓	✓
 Inlay/Onlay	✓			✓
 Veneers	✓			✓
 Screw-Retained Crown	✓	✓		✓
 Custom Abutment	✓		✓	
 Thimble Bar	✓		✓	
 Partial Denture Frameworks	✓	✓	✓	
 Superstructures Over Bars	✓	✓		
 Full Dentures		✓		
 Full Dentures without Teeth		✓		
 Bite Splint		✓		



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