



# SMART SERVO SYSTEM SUPREME PERFORMANCE

A Decade of Leading Innovation





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

# Smart Servo System for Supreme Performance A Decade of Leading Innovation

**P55D** - P55D is a new high-end dry milling machine from UP3D, designed with precision servo control and all-weather stable production technology for 24-hour efficient continuous milling. Equipped with a high-speed electric spindle from Germany and a plug-and-play design without the need for an air source, it allows for intelligent remote control. Compatible with a variety of materials, its integrated dust-proof design and structural optimization reduce maintenance and enhance efficiency. With a decade of technical accumulation and innovation, P55D significantly boosts productivity, offering end users a completely upgraded experience.



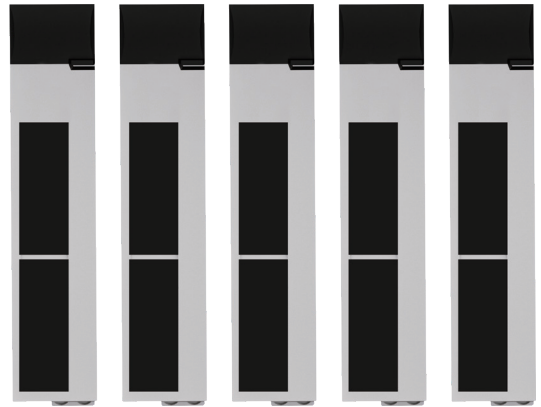
# UNLEASH DENTAL CREATIVITY



## Precision Servo Control

### Round-the-Clock Stable Production

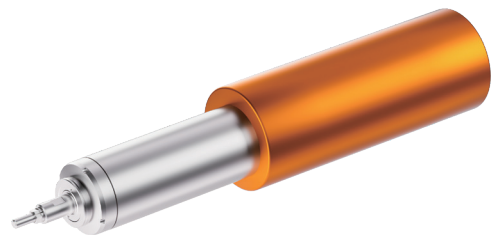
The full-servo drive system precisely compensates for milling vibrations, ensuring stable and efficient production 24 hours a day. This allows for the effortless precision milling of complex restoration.



## High-Quality Spindle

### German Engineering, Stronger and Air-free

Featuring a German 60,000rpm high-power electric spindle, P55D offers reliable performance for milling complex cases and hard materials. Its compressed air-free design streamlines operations—Simply plug and mill.



## Material Flexibility

### Efficiency Enhancement through Custom Solutions

Supports a variety of popular materials such as zirconia, wax, PMMA, PEEK, composite resin and soft metals. Compatible with both disc and block formats, it offers custom-tailored, efficient restoration solutions to meet the needs of diverse cases.



## Smart Remote Control Mill Manage at Your Fingertip

Utilize MillMind app for smart remote control, coupled with smart milling alerts and tool life monitoring. This reduces downtime and significantly enhances efficiency, making the workflow more effective.

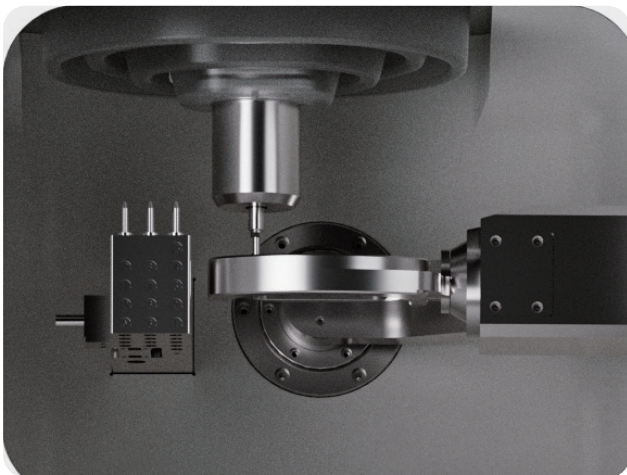
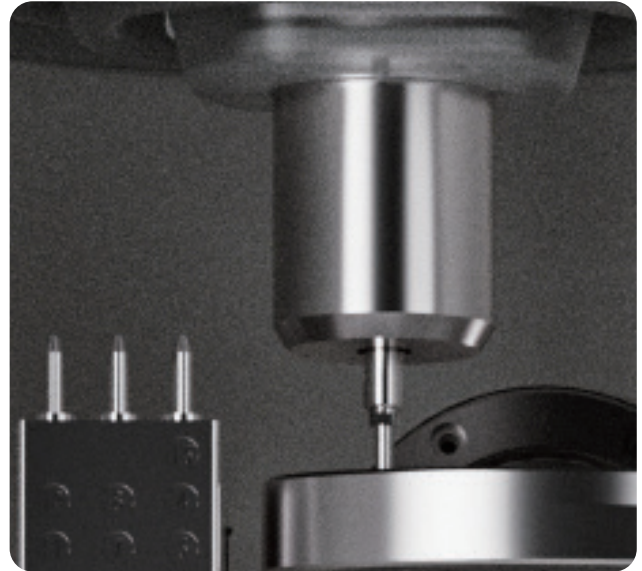


### 01. Integrated Dustproof Design Extended Service Life

P55D features an integrated, fully sealed silicone dustproof design, effectively isolating dust, reducing equipment damage and maintenance needs, thereby significantly extending its service life.

### 02. Structural Optimization Upgrade Reduced Maintenance Costs

The maintenance process has been streamlined, and the upgraded machine allows even those without prior experience to perform maintenance quickly, significantly reducing overall maintenance costs and enhancing operational efficiency.



### 03. Bigger Milling Chamber Optimized Work Efficiency

A larger milling chamber provides operators with more space and flexibility, simplifying the process of material installation and removal, effectively improving work efficiency.

# Technical Specifications

## GENERAL

Fields of Application	Dry machining
Materials	Zirconia,wax,PMMA,PEEK,composite resin,soft milling CoCr sintering metal
Material Specifications	Discs: height 10-30mm, diameter 98.5mm    Blocks up to 40x20x20mm (Max)
Indications	Crowns, anatomical crowns, screw-retained crowns, inlays, onlays, veneers, telescopic crowns, abutments, bite splints, full dentures etc.

## BASE SYSTEM

Construction	Machine bed made of solid cast aluminum body
Number of Axes	5-axis
Housing	Steel, white high-gloss lacquer finish, main front housing: injection-molded
Linear Axes (X/Y/Z)	Precision ball screw drive; Travel: 104x60x100mm
Rotary Axes (A/B)	A-axis: 360°; B-axis: ±33°
Control Unit	5-axis precision full servo drive system
Lighting	LED lighting inside the working chamber, with additional status indication
Power	1.0KW

## SPINDLE

General	High-frequency spindle, automatic tool change, no air cooling required
Speed	Up to 60,000 rpm
Tool Holding Diameter	Diameter $\Phi$ 4
Power	Max. 0.8KW

## AUTOMATION

Tool Change	Tool magazine for 13 tools, length measurement and tool breakage monitoring via precision measuring key
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## CONNECTION REQUIREMENTS

Voltage	100VAC-130VAC, 200VAC-235VAC (selectable), 50~60Hz
Dust Extraction	Filter level: M; Flow rate: 2500L/min
Data	Wi-fi, USB, Ethernet port

## ENVIRONMENTAL CONDITIONS

Operating Temperature	Between 10°C and 35°C
Air Moisture	Below 80% (relative), non-condensing

## DIMENSIONS & WEIGHTS

Dimensions (W/D/H)	442x560x704mm
Weight	106KG

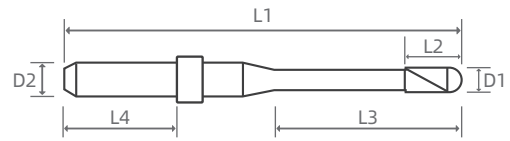
## SCOPE OF DELIVERY

CAM Software	UPCAM, Millbox
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## - 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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