

User Manual

[MD-400D 3D Printer]

*Please read this guide carefully before using this printer



Shenzhen MINGDA Technology Co., Ltd

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Thank you for choosing MINGDA Technology's products!

For the best experience, please read this user manual carefully and follow the instructions to operate the printer. If you encounter any issues with the printer, please contact us using the contact information provided at the end of this user manual. Our team is always ready to provide you with high-quality service.

To enhance your usage of our product, you can also learn how to use the printer through the following means:

1. User Manual: Relevant instructions and videos can be found on the included USB drive.

2. You can also visit our official website (<u>www.3dmingda.com</u>) for information on software, hardware, contact details, device instructions, device specifications, and warranty information, among other things.

Cautionary Notes

1. Please do not place the printer in environments with significant vibrations or instability, as machine shaking can affect the print quality.

2. Avoid touching the nozzle and heated bed while the printer is in operation to prevent potential burns from high temperatures, resulting in personal injury.

3. Refrain from moving the device during the printing process to prevent accidents and injuries.

4. Do not dismantle the equipment or alter circuit settings without authorization.

5. Avoid using the device in high-temperature or humid environments to prevent compromising device

performance or creating safety hazards.

6. In case of an emergency, immediately cease using the device and power it off.



1. Overview

This manual provides instructions on the usage of the 3D printer, covering aspects such as an overall introduction to the device, operational procedures, maintenance, and care. The aim of this manual is to assist you in correctly using and maintaining the 3D printer, ensuring device performance and safety, extending the lifespan of the equipment, and enhancing print quality. We hope that you follow the requirements and recommendations outlined in this manual during usage, and maintain attention to and care for the equipment. Thank you for choosing our product, and we wish you a pleasant experience!

2. Device Introduction

Device Parameters

Basic Parameters					
Product Model	MD-400D				
Machine Dimensions	690*790*910mm				
Max. Build Dimensions	400*400*400mm				
Duplicate Mode	400(2*200)*400*400 mm				
Mirror Mode	320(2*160)*400*400 mm				
Print Technology	Fused Deposition Modeling (FDM)				
Rated Voltage	100-240V, 50/60Hz				
Rated Power	800W				
Ambient temperature	10°C-30°C / 50°F-86°F				
Extruders	Two				
Max. Nozzle Temperature	350°C				
Max. Bed Temperature	110°C				
Screen	7inch touch screen				
Printing Method	USB Flash Disk / LAN Printing				
Connection	USB Flash Disk / WIFI / Ethernet				
Power Loss Recovery	Yes				
Filament Detection	Yes				
Fast Auto leveling	Yes				
Camera	Yes				
Fast Calibrate Offset	Yes				
Supported Filament	Common filament: PLA, TPU, PETG; Engineering filament: PA-CF/GF, PET-CF/GF, HtPA-CF/GF, ABS-GF25, ABS-CF20, PA-GF25/CF25; Support filament: S-Mulit, S-HtPA, PVA, etc				



Packing List



Tool List



U-disk



Nozzle*2



Diagonal pliers



7mm Sleeve



Auxiliary calibration board



Note: The 400D is equipped with a hardened steel nozzle. If you frequently print high-temperature materials, long-term printing will cause wear to the nozzle. We recommend replacing the nozzle every 500 printing hours.



3. Operational Steps

Unboxing Inspection

Unpack and inspect the device for any damage. If there is any abnormality, please contact the manufacturer or dealer.

Device Installation

1. Install the warning light.



2. Install the antenna.





3. Power on

Please ensure that the print platform is clear before connecting the power and check if the device is connected properly.

In a good ventilation and dry environment



Insert a power socket, Press the switch



Press the power button to turn on the printer

4. Power off

When you turn off the printer, please don't press the power button directly! Check the Page 10, click "General-System-Shutdown-Printer" to turn off the printer



Click the "General" button.



Click the "System" button.



Click the "Shutdown" button.



Startup Configuration

(For the first startup, it will enter the configuration wizard.)

1. Select Language and Time Zone



Click the right arrow to choose the language, and click the upper right arrow to proceed to the next step.

2. Auto Bed Leveling



Start by selecting your continent on the left, then click the right arrow to choose your specific region. [Time zone settings will take effect after connecting to Wi-Fi and restarting the system.]



Click the "Calibrate" button to initiate the quick auto bed leveling process, which will take approximately 3 minutes. Please be patient.



Click the "Save" button to store the bed leveling data and automatically restart the printer.

3. Wi-Fi



Click the right arrow button, select the network you want to connect to. The first connection may take some time, please be patient. If the network is not displayed for an extended period, click the refresh button at the top.



Enter the network password and then click Save.





Once the connection is successful, click the Close button.



Upon successful connection, click the checkmark in the upper right corner to enter the main interface of the machine. If you do not need to connect to the network, you can also click the checkmark to skip this step.

After completing the above steps, Home all Axis



Click the "Move" button



Click the "Home" button

Z Calibrate



Click "Setting-Z Calibrate"



Click "Start", wait Z axis calibrating and click "Accept" and comfirm



Introduction of machine operation page



	Primary interface	Explain
01	Temperature	Temperature display area.
02	Time	Time display.
03	Move	Adjust the value of the XYZ axis.
04	Preheat	Pre-set nozzle & hotbed's temperature.
05	Extrude	To unload or load filament.
06	Settings	Printer's printing value adjustment.
07	General	More printer setting.
08	Print	Start printing.
09	Stop	Emergency stop button.
10	Homepage	Return to the main page.
11	Return	Return to the previous page.



Settings:



	Secondry interface	Explain
01	Leveling	Auto-leveling
02	Z Calibrate	Calibrate Z offset
03	Fan	Cooling fan adjustment
04	Leds	Turn on/off Light
05	Save config	To save your configuration
06	KlipperScreen	Includes some basic settings such as time, language, screen timeout, notification sound toggle, and automatic shutdown after printing completion.
07	Network	To connect Wi-Fi
08	Print Mode	Select Copy Mirror or Autonomous Mode



General:



	Secondry interface	Explain
01	Manual	Manual
02	Troubleshooting	Troubleshooting
03	Cautions	Cautions
04	Maintenance	Maintenance
05	Calibration	Contains some basic test models, which can be selected to test the corresponding functions.
06	XY Offset	Calibrate XY axis
07	Z Offset	Calibrate Z axis
80	System	Check next page



System:



	Secondry interface	Explain
01	Full update	Update all content available for update on the current page
02	Reset	Reset to Factory Defaults
03	Refresh	Refresh the current page to check for updates, in conjunction with the use of 'Full update'.
04	Restart	Restart the printer
05	Shutdown	Turn off the printer, click Shutdown-Printer



Extruder Offset Calibration

XY Axis Offset Calibration



Remove the PEI sheet first, the camera was covered with PEI.



Click the "General" button.



Click the "**Start**" button, and the left extruder will move to the calibration camera's position.



Fine-tune the XY axis to align the nozzle center of the right extruder with the origin of the XY axis. Click "**Confirm Pos**" again to confirm the position of the right extruder.

Tips:

Wipe the nozzle clean before calibration to avoid any interference during the process.



Put the Auxiliary calibration board in the center of platform



Click the "XY Offset" button.



Fine-tune the XY axis to align the nozzle center of the left extruder with the origin of the XY axis. Click **"Confirm Pos"** to confirm the position of the left extruder. Meanwhile, the right extruder will move to the calibration camera's position.



Click the "**Save**" button to save the XY offset of the right extruder relative to the left extruder.

After finishing, don't put the PEI Sheet back to platform immediately. Please finish the Z offset first.



Z Axis Offset Calibration

Tips: Wipe the nozzle clean before calibration to avoid any interference during the process.



Click the "Z Offset" button.



Click the "Start" button to begin the automatic calibration. Initially, the left extruder will move to the top of the Z axis calibration sensor and slowly descend to trigger the switch. It will then automatically switch to the right extruder, repeating the same motion as the left extruder.



After the automatic calibration is complete, click the "Accept" button to save the Z-axis offset value.



While calibrating the Z-axis offset, the extruder will move towards the sensor button located the left side of the camera.

Safety Reminder: To ensure that the nozzle correctly lands on the sensor, please calibrate the XY axis before calibrating the Z axis. While the extruder is moving downward, pay close attention to its movement. If there is excessive deviation or signs of extreme extrusion pressure, click the return button in the top left corner of the screen or the emergency stop button (1) in the bottom left corner to stop the calibration. Contact customer support or refer to official videos for troubleshooting solutions.



Install the filament

(Take PLA filament as an example)

1. Hang two volumes of PLA Filament on the scraping pole in the left and right Filament box, and insert the Filament from the inlet port until the Filament are exposed to the printed head along the guide pipe.





2. You can directly pull out the guide tube upwards, pull the handle of the inlet port, insert the Filament into the squeeze machine into the material mouth.







3. Load Filament for the Left and Right Extruders



Click the "Extrude" button

Select the first extruder "T0", Click '100mm', click on the feed speed '5mm/s', then click 'load' to inport the filament. Sequentially load filament for the left and right extruders. If the temperature is too low, a prompt will appear indicating the need for heating. Click "Accept," wait for the nozzle temperature to reach 240°C, and then click the "Load" button to feed the filament.



Switch to the second extruder "T1", Repeat the steps of the first extruder.



After the completion of loading filament for "T1," it is necessary to click on the "T0" icon again. Failure to do so may result in collisions during subsequent movement commands for the extruder.

4. After the filament feeding is completed, Insert the large catheter.





How to unload filament



Click the "Extrude" button



Heat the hotend which was wanted to unload filament up to 240°C. T0 is left hotend, T1 is right hotend.



Using the T0 hot end as an example, select T0 first. then set "Distance mm" as 25, "Speed mm/s" as 5, and click "load" once.



After finishing, quickly set "Distance mm" to 100, and click "unload" once. Wait for 6-7 seconds, and the filament can be taken out from the extruder.





Resume printing after power failure

When the printer is in the midst of the printing process, power outages may occur at times. This printer is equipped with a resume printing function to assist you in resuming the print from the point of interruption.



After power is restored, the printer will prompt whether to resume printing.



After clicking 'Confirm,' the printer will begin the preheating process on the Picture 2, continuing until the specified temperature is reached.



After reaching the specified temperature, the printer will automatically transition to the printing interface.



Slicing Software Installation and Usage

Note: Copy the data from the USB drive to your computer for backup.

Our company's slicing software is designed to work seamlessly with our machines to meet customer requirements.

Installation:

Search "http://www.3dmingda.com/download" in the Broswer.

Download "MINGDA Orca Slicer" in this page

Configuration:



Upon the first run of Mingda OrcaSlicer, you will enter the configuration wizard.



Choose the MD-400D model and click "Confirm."



Select the desired filament type.



MingDa Generic PLA Silk

----- Add/Remove filament -----

MingDa Generic TPU

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Usage

Default

First layer

🛛 Prepare Click the "Prepare" button. Printer Untitled * * 🛱 Calibration MyKlipper 0.4 nozzle î Serview Preview 📃 Project 2 ----- System presets -----Printer \odot MingDa 400D 0.4 nozzle (Dual) MingDa 400D 0.4 nozzle (Dual) [1] MingDa 400D 0.4 nozzle (Left) Bed type ~ Smooth PEI Plate / High Temp Plate MingDa 400D 0.4 nozzle (Right) MyKlipper 0.4 nozzle ((() Filament + -0 --- Add/Remove printers -----MingDa Generic PLA 1 Advanced 💽 \Xi 💱 Global Objects 4 ~0.20mm Standard @MingDa 400D BQ (III) Filament + -Quality Strength Speed Support Others Notes MingDa Generic PLA Layer height Layer height 0.2 mm ----- System presets ------]8 3 First layer height 0.3 MingDa Generic PETG mm MingDa Generic PLA Line width

Choose the printer model and select the print material settings.

mm or %

mm or %

0.4

0.4

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🖴 Layer height		^ ////	
Layer height	0.2 mm		
First layer height	0.3 mm		
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First layer	0.4 mm or %	V. File name: test model.sti	Open Cancel
Outer wall	0.4 mm or %		- Cancer -
Inner wall	0.4 mm or %		
Terrefore	0.00		

Load the STL model, adjust the print parameters. Once you confirm everything is correct, click the "Slice plate" button to slice the model.

Finally, click "Export G-code file" to save the file.



Printing



Local Printing





Find the folder and Click the arrow on the right

	🐺 190° 🚟 60°		MINGDA Print		14:09
<	Name	†	Date	c	
	Udisk_sda1				
	Modified State 17	1: 2023-11-11 22:11 3 MB ne : 53m		• •	*
-	CFFF Modifier Stzo: 8 Print Tir	P block 1: 2023-11-11 21:11 3 MB ne : 1d 18h 56m		• •	
(1)	Modifier Size : 3. Print Tir	PIA 1: 2023-11-11 22:11 2 MB ne : 3h 53m		• *	-
	Test	printer			-

Select the test gcode which was preset in the U-disk.



🛜 LAN Printing

Ensure that the printer and the computer host are on the same local network.



Click "Settings" to enter the settings page.



Click "Network" to enter the network page.



Check the printer's IP address.

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w Filament	+ - @	Save Machine as	
1 VingDa Generic PLA		MingDa 400D 0.4 nozzle (Dual) - Copy	
Section Process Global Objects	Advanced 🌔 📃 🕄	Print Host upload	
~ 0.20mm Standard @MingD	a 400D 🖺 C	Host Type: Octo/Klipper Hostname, IP or URL: 2.168.251.119 Browse Test	
Quality Strength Speed	Support Others Notes	Device UI:	
🗎 Layer height		API Key / Password:	
Layer height	0.2 mm	HTTPS CA Hie:	
First layer height	0.3 mm	revocation checks:	×
🚍 Line width		HTTPS CA file is optional. It is	5.050
Default	0.4 mm or %	Connection to OctoPrint works corre	ctly.
First layer	0.4 mm or %		
Outer wall	0.4 mm or %		эк
Inner wall	0.4 mm or %		
Top surface	0.38 mm or %		

In Mingda OrcaSlicer, click the WiFi icon, select Host type as Octo/Klipper, enter the printer's IP address, and press Enter. Click the "Test" button to verify the successful connection.



File Transfer:

Spevice Project Coder schart Image: Specified Coder schart Image: Specified Coder schart Image: Specified
Color scheme Une Type Time Perce Time Vall Sensis 25% Outer wall 26m38 102% Outer wall 26m38 102% Outer wall 26m38 102% Outer wall 26m38 25% Outer wall 26m38 102% Outer wal

Click the dropdown icon 🔽 in the top right corner , select "Print."

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↑	review	문 Device	🔳 Project			Slice plate	Pri	
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 MingDa 400D 0.4 nozzle (Dual) Bed type Smooth PEI Plate / (iii) Filament MingDa Generic PLA Process Global Objects 	High Temp P + Advanced	C ≈			Line Type Inner wall Outer wall Overhang wall Sparse infill Internal solid infi Top surface Bottom surface Bridge Internal Bridy	Time Percent 38m15s 37.8% 26m13s 25.9% 25s 0.4% 6m36s 6.5% 11 0m18s 1* 2m27* 2/	Disp'	239 47.90
 0.20mm Standard @MingDa 40 Quality Strength Speed Su Layer height 	pport Ser	nd G-Cod	e to printer host		SKIR	× .	8 X	
Layer height	0.2		test model	_PLA_41m.gcode				
First layer height	0.3		Use forward	d slashes 🌔 💦 a dire	ctory separator if nee	ded.		
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First layer	0.4							
Outer wall	0.4 mm c	or %						
Inner wall	0.4 mm c	or%						1
Top surface	0.38 mm c	or %						
Sparse infill	0.4 mm c	or %				145		
Internal solid infill	0.4 mm (v %				105		*

Click "Print" and choose "Upload and Print."



Device Connection

After success	ful connection, click on "De	evice" 🖥 Device	
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n e	🖯 Prepare 🛛 😂	Preview 🔡 Device	🗐 Project
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Ō	$\begin{array}{c cccccc} x & cccccccccccccccccccccccccccc$	Watchine Voicity 450 5.P ^{pr1} /inter ⁵ Limits Soudo Mark Accel to Dated. 2500 mm/s ²	 Console Console

1. Task List: Drag G-code files to this task list for printing.

2. **Temperature Control:** Displays machine temperature changes and allows pre-setting nozzle and bed temperatures.

3. Camera: Monitors the printing status.

4. **Movement Control:** Controls the movement of each axis and allows compensation settings after leveling.

5. **Printer Limits:** Controls the maximum acceleration of the printer, usually doesn't need to be changed.

6. Console: Sends G-code commands to run the machine and displays error output.



Print Mode

Copy Mode

Print Size: X * Y * Z: (2*200) * 400 * 400mm

In duplication mode, select the MingDa 400D with a 0.4mm nozzle (Left) for slicing. The models should be placed on the left side and not exceed the centerline of the platform, as shown in the image.



In the printer interface:



Click the "Settings" button on the screen.



Return to the main interface, select "Print."

Note: After the printer restarts, it will default to Auto-park Mode.



Choose "Print Mode."



Insert the U-disk.



Select "Copy Mode." A message will indicate a successful switch.



Choose the print file for printing.



Mirror Mode

Print Size: X * Y * Z: (2*160) * 400 * 400mm

In mirror mode, select the MingDa 400D 0.4mm nozzle (Left) for slicing. Place the models on the left side, ensuring they do not exceed the red area on the platform in the image to prevent nozzle collisions.



In the printer interface:



Click the "Settings" button on the screen.



Return to the main interface, select "Print."

Note: After the printer restarts, it will default to Auto-park Mode.



Choose "Print Mode."



Insert the U-disk.



Select "Mirror Mode." A message will indicate a successful switch.

	i 190° 🗮 60°	MINGDA Print	14:09
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Ud	Iisk_sda1 CFFFP 01-vas Modified : 2023-11-11 Stzn : 7.3 MB Print Time : 53m	ie 22:11	• •
	CFFFP block Modified : 2023-11-11 Size : 8.3 MB Print Time : 1d 19h 50	21:11 im	• * 🛓
([])	Test PIA Modified : 2023-11-11 Size : 3.2 MB Print Time : 3h 53m		• • 🔳
	Test printer		

Choose the print file for printing.



Print Two Colors

Printing size: 400 * 400 * 400mm

Selecting the MingDa 400D 0.4 nozzle (Dual)

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∽ MingDa 400D 0.4 nozzle (Dual)	6 🗢			
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		Tri	angles: 37232	0

- 1. In the filaments column on the left side of the interface, click "+" to add another filament.
- 2. Choose and modify the filament information.
- 3. In the Process section, click to switch to the "Objects" option.
- 4. Click on the color box next to the STL file to select the desired filament.

In the printer interface:

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Temp(°C)	.t.	î	
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32	-		
re 51/40	Extrude	Settings	l
- same france			
	Print	General	
	MING Temp(*C) 30 32 re 51/40	MINDDA Temp(*C) 30 32 40 5140 40 40 40 40 40 40 40 40 40 40 40 40 4	MINGOA 14.09 Temp(*C) 30 30 40 50 40 50 40 50 14.09 14.09 Preheat 50 6 50 6 50 6 50 6 6 6 7 6 7 7 8 8 9 9 9 14 16 16 16 16 16 16 16 16 16 16

By default, it is in "Auto-park Mode"; select "Print."

Note: When printing dual-color models, the printer will automatically switch to Auto-park Mode.

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	Udisk_sda1 Modfied: 2023-11-20 20: Size: 101 M8	11	e a >		Udisk_sda	1 CFFFP 01-vase Modified: 2023-11-11 22 Size: 7.3 MB Print Tame: 53m	2.11		
•	020200 Modified : 2023-11-11 22: Size : 9.2 MB Print Time : 53m			•		CFFFP block Modified : 2023-11-11 2* Size : 8.3 MB Print Time : 1d 18h 56m		J	
	M4 x4 xyz cube Modified : 2023-11-11 22: State : 3.2 M8 Print Time : 3h 53m		• • •	(1)		Test PIA Modified : 2023-11-11 2: Size : 3.2 MB Print Time : 3h 53m		J	۲
						Test printer			

Insert the U-disk.

Choose the print file for printing.



Double extrusion: Start the Prime tower

Because there is always one printer in standby mode during the printing process, it is easy to cause defects such as wire drawing and material leakage. Prime tower can solve this problem, the extruder will print a prime tower before each layer printing. Any material leakage will be printed on the tower, effectively avoiding the phenomenon of material leakage when replacing the extruder.

If you want to print the following two modes, we recommend adding this option to your Gcode.



- 1. Select the "Global" section.
- 2. Select the "Others" section.
- 3. Check the "Enable" option in the "Prime tower" settings.

Note: The printing position of the Prime tower cannot coincide with the model



Printing Support

Printing size: 400 * 400 * 400mm

Selecting the MingDa 400D 0.4 nozzle (Dual)



- 1. On the left side of the interface, in the filaments column, click "+" to add another filament.
- 2. Choose and modify the filament information.
- 3. Then, select the "Support" section.
- 4. Check the "Enable support" option.
- 5. In the "Filament for Supports" option, choose the filament needed for supports.
- 6. Click "Slice plate" to preview.

In the printer interface:

🐺 30° 🚟 32°	MINGE	A	14:09
	Temp(°C)		
< 🐺 Extruder	30	+	4
Truder 1	30	Move	Preheat
🗯 Heater bed	32	-	
🗱 Host Temperatum	± 51/40	Extrude	Settings
60 40			
(1) 20		Print	General
7:50 7:54 7	:58 8:02 8:06		

By default, it is in "Auto-park Mode"; select "Print."



automatically switch to Auto-park Mode.

Note: When printing models with supports, the printer will



Insert the U-disk.

Choose the print file for printing.



Printing

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合 Prepare	Preview 🗜	Device	🔳 Project					de file	
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✓ MingDa 400D 0.4 nozzle (Du	al)	6 *		Printer settings					>
Bed type ~ Smooth PEI Plat	e / High Temp Plat	e .		∼ * MingDa 400D 0 2 e	(Dual)				Advanced
(m) Etters est	1	(7)	$\backslash \frown$	Basic information Machin	ne G-code	Multim	aterial Extruder 1	Motion ability	Notes
(w) Flament	+ -	. @		thumbnails					
1 VingDa Generic PLA		C		Use relative E distances	\checkmark				
S Process Global Objects	Advanced			Use firmware retraction					
	(000			Time cost	0 mc	oney/h			
~0.20mm Standard @MingDa	a 400D			Cooling Fan					
Quality Strength Speed	Support Others	Notes		Fan speed-up time	0	S	Only overhangs 🔽		
🗎 Layer height		^		Fan kick-start time	0	S			
Layer height	0.2 mm			Extruder Clearance					
First layer height	0.3 mm			Radius	50	mm			
🚍 Line width				Height to rod	60	mm			
Default	0.4 mm or %			Height to lid	350	mm			
First layer	0.4 mm or %			Accessory					
loper wall	0.4 mm or %			Nozzle type	~ Harden	ed st			
Top surface	0.38 mm or %	1		Auxiliary part cooling fan	9	3			

Open the settings interface in the Printer tab, and check 'Auxiliary Part Cooling Fan' under "Basic Information-Accessory".

🚍 File 🗸 📄 🐟 🖈	🛱 Calibr	ation			Untitled	- 🗆 ×
	Preview	20	Device	🔳 Proje	Filament settings	(4) ×
Printer			٢		MingDa Generic PLA 2	🖺 Q. Advanced 🌑
∼ MingDa 400D 0.4 nozzle (Dual)		C 🔶		Tilement Carling Continue Consider	and Multimeterial Nature
Bed type Smooth PEI Plate	/ High Te	mp Plate			Filament Cooling Setting Overrides Advar	iced Multimaterial Notes
(III) Filament		+ -	۲	1	Slow printing down for better layer cooling	Â
1 VingDa Generic PLA			ß		Min print speed 10 mm/s	
Process Global Objects	Adva	nced			Force cooling for overhangs under the bridges	
· 0.20mm Standard @Mingba	4000				Cooling overhang threshold 50%	
Quality Strength Speed S	Support	Others	Notes		Fan speed for overhangs 🗘 100 %	
E Layer height	Denarrow		î		Support interface fan speed 2 -1 %	
Layer height	0.2	mm			Auxiliary part cooling fan	
First layer height	0.3	mm				3
🛱 Line width					Fan speed 🚽 100 %	
Default	0.4	mm or %			& Exhaust fan	
First layer	0.4	mm or %			Activate air filtration	
Outer wall	0.4	mm or %				
Inner wall	0.4	mm or %			During print \sim 60 %	
Top surface	0.38	mm or %			Complete print 👶 80 %	

Due to the different feature of filament, if you do not need an auxiliary fan or need to adjust the fan speed, please go to the Filament tab, open the settings interface, and choose Cooling-Auxiliary Part Cooling Fan. Adjust the Fan Speed as needed.



4. Maintenance and Care

Cleaning the Nozzle: After printing is complete, promptly clean the residue on the nozzle using a tool and taking advantage of the nozzle's residual heat. Avoid touching the nozzle directly with your hands to prevent burns.

Replacing Filaments: Timely replace filaments based on the type and actual usage. It is recommended to use filaments recommended by the manufacturer. Seal filament not in use for an extended period, as excessive exposure to moisture in the air can make the filament brittle.

Checking the Platform: Regularly check if the print platform is flat. If there is deformation or damage, contact the manufacturer or dealer for repairs.

Regular Lubrication: Periodically apply lubricating oil to the lead screw and guide rails. During the operation of the printer, friction between various parts occurs. Without proper lubrication, it can lead to wear and damage.

Software Updates: Regularly update the printing software to improve print quality and efficiency.

Replace the hot end

- 1. Remove the screws on both sides of the print head cover (a total of 4);
- 2. Unplug the connecting terminal on the hot end and loosen the top wire that fixes the hot end;
- 3. Remove the entire hot end;

4. Insert the hot end that needs to be replaced, tighten the top screw when it is in place, and then plug in the connecting terminal.

5. Install the print head cover and circuit board protective cover







Note: After replacing the hot end, it is necessary to recheck the deviation values of the left and right heads. If the deviation is too large, it needs to be recalibrated





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