



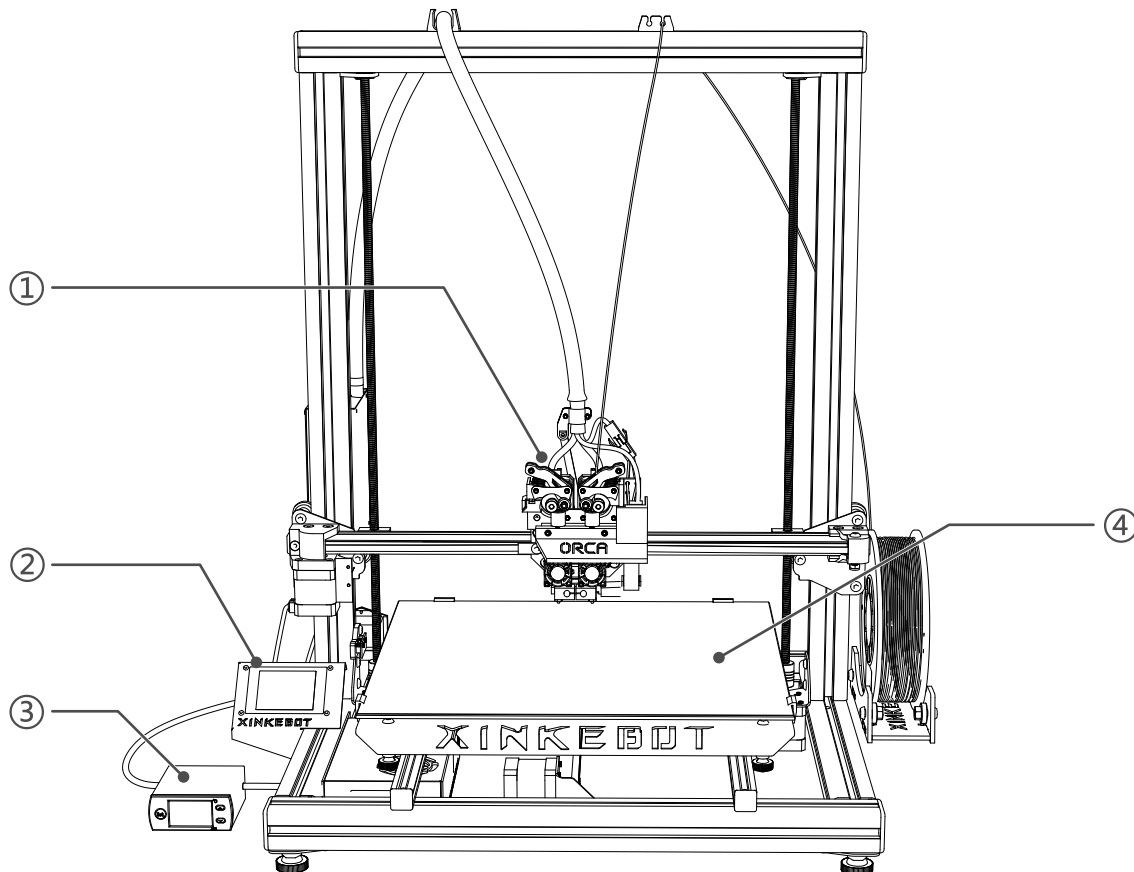
ORCA 2+ USER MANUAL

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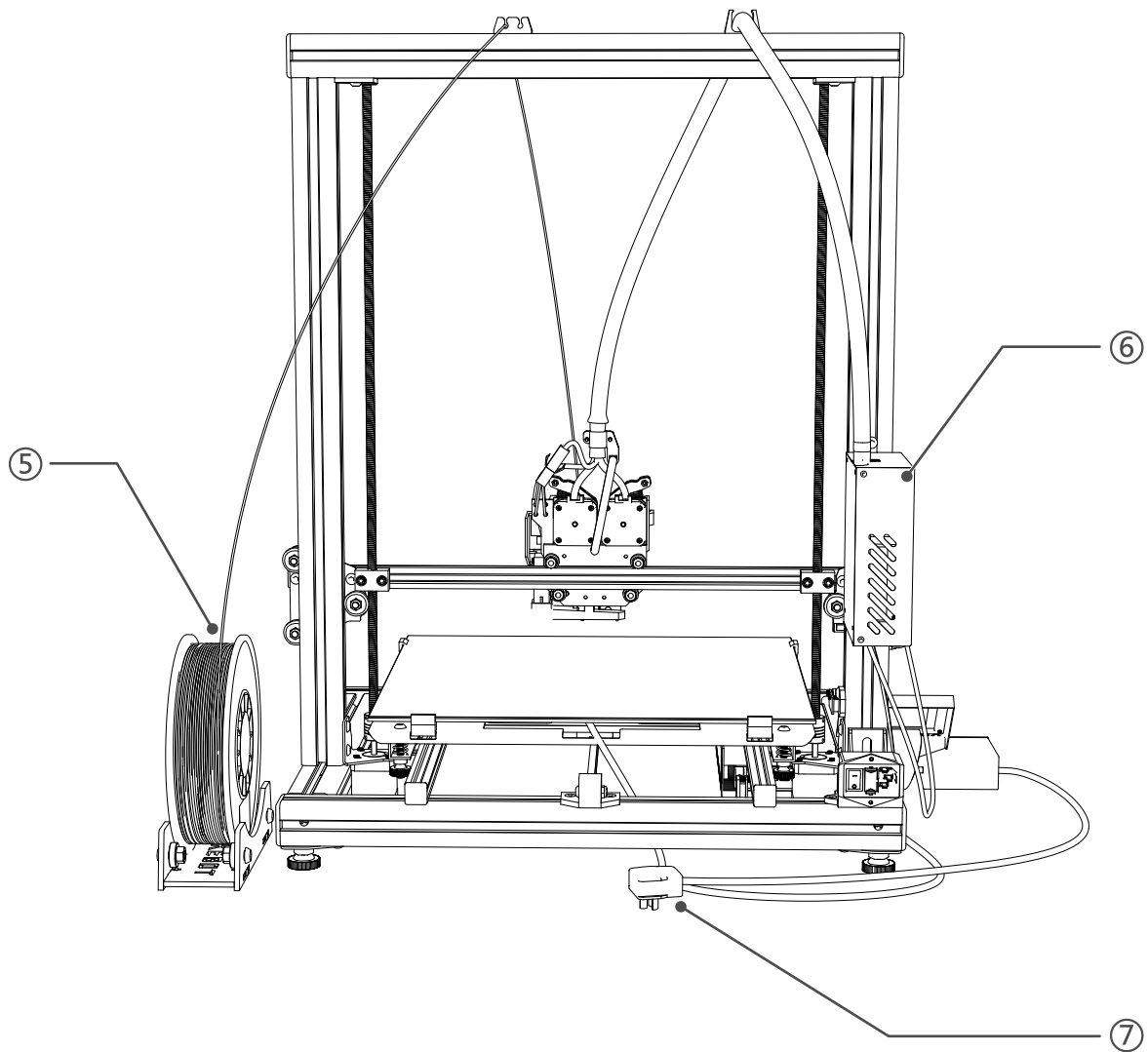
GETTING STARTED Part 1

Overview of ORCA2+



1. Extruder
2. Control Panel
3. Temperature Controller
4. Heated Build Plate

Overview of ORCA2+



- 5. Filament Spool & Spool Holder
- 6. Motherboard Box
- 7. Plug of the Build Plate

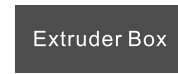
Accessory Checklist



SD Card



Spool Holder



Extruder Kit



Filament



Filament Holder
&
Cable Holder



Tool Kit



Power Cord



USB Cable



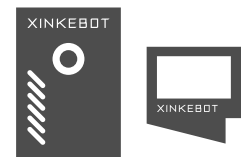
Auto Leveling Kit



Glue Stick



Corner Connectors (X2)



Motherboard Box
&
Control Panel

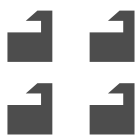
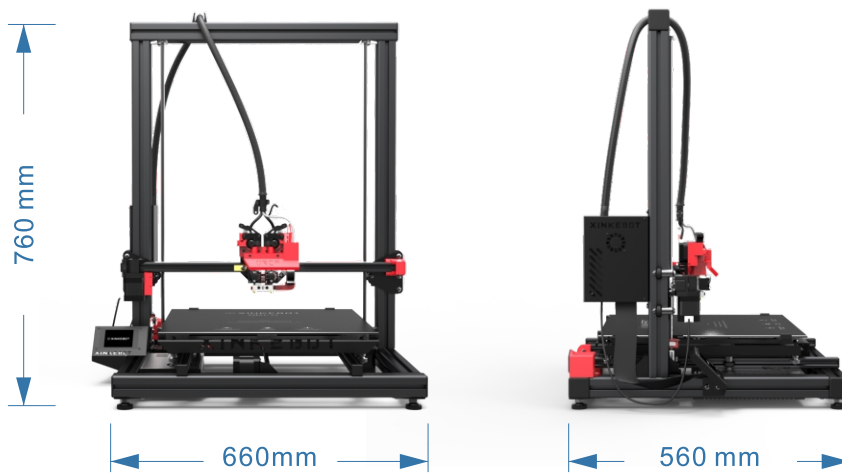


Plate Holders



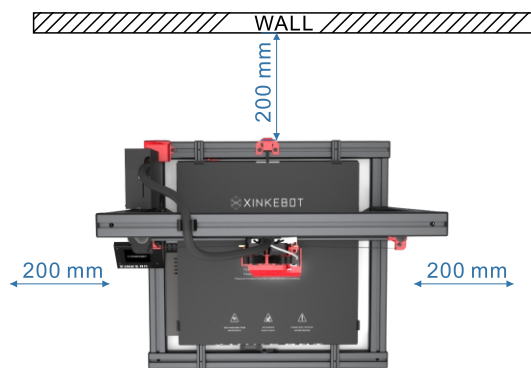
Heated Build Plate Kit

Setting and Starting up

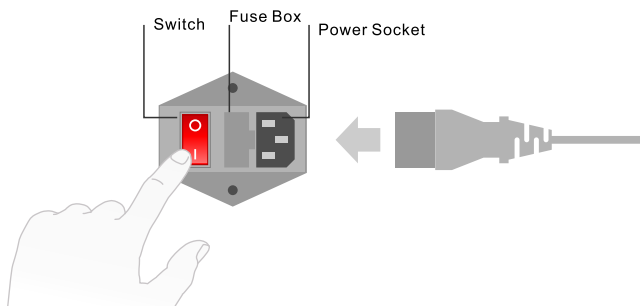


Please put your ORCA2+ on a flat surface and make sure all the corners of it are even and stable.

And please leave around your ORCA2+ a space of at least 200mm to make it less affected by external factors.

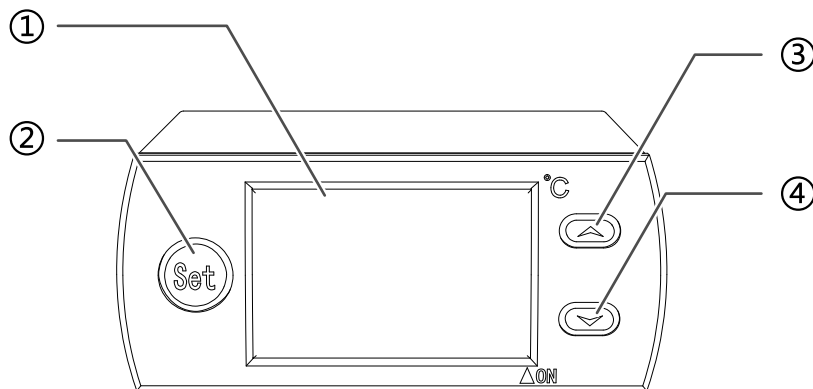


Please take out the power cord, plug it into the socket and then switch on.





【Warning】 Please make sure the printer works at a voltage of 110V - 230V before plug in.

Operating the Temperature Controller









1. Display
2. Set Button
3. Up Arrow Button
4. Down Arrow Button







	Press	Temperature Settings
	Press and Hold	Configuration
	Press and Hold	Power On/Off
 	Press and Hold	Restore Defaults



Power On/Off : When the display reads “---” , it means the printer is power-off. To power on, press and hold the down arrow button  until a temperature value appears on the display. When the printer is power-on, press and hold down arrow button  until the display reads “---” and then it is power-off.

Advanced Settings

Temperature Settings : Press the set button  to enter the Temperature Settings interface, press the up  or down  arrow button to set the values. When you finish the setting, wait for a few seconds and you will be led to the main interface automatically.

Configuration : Press and hold the set button  for 6 seconds, when the display reads "F1", it means you already enter the Configuration interface. Press the up  or down  arrow button and select one code from F1 - F2 - F3 - F4 - F5 - C1 - C2 - C3 to set the values. (see the table below)

Change Default Values : Press the set button  to enter the Temperature Settings interface and set up the temperature, then wait until it automatically jumps to the main interface. Afterwards, press and hold the set button  and you will enter the Configuration interface. Set the values and then press the set button , when any code of F1-C3 appears, press and hold  the set button  for 6 seconds. When the display reads "COP", it means the current values  are saved as default values.

Restore Defaults : Press and hold the up and down arrow buttons   at the same time until the display reads "888" and defaults are restored successfully.

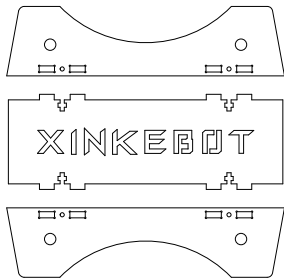
Code	Function	Range	Default Value
F1	Min. Temperature	$\geq 0^{\circ}\text{C}$	0°C
F2	Max. Temperature	$\leq 500^{\circ}\text{C}$	350°C
F3	Return Difference Value	$1\text{—}15^{\circ}\text{C}$	5°C
F4	Delay Start-up Time	$0\text{—}10\text{mins}$	1min
F5	Calibrate Temperatures	$-15\text{—}15^{\circ}\text{C}$	0°C
C1	High-temperature Alarm Value	C2 Value— 500°C	100°C
C2	Low-temperature Alarm Value	0°C —C1Value	0°C
C3	Alarm Delay Time	$0\text{—}90\text{mins}$	0min

PRINTING WITH YOUR ORCA2+ Part 2

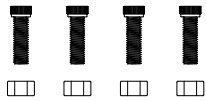
Loading Filament

Assembling the spool holder

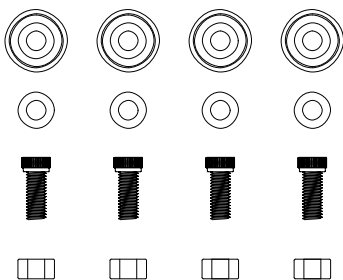
Take out the spool holder parts from the Accessories box.



acrylic board*3



M3 screw & nut*4

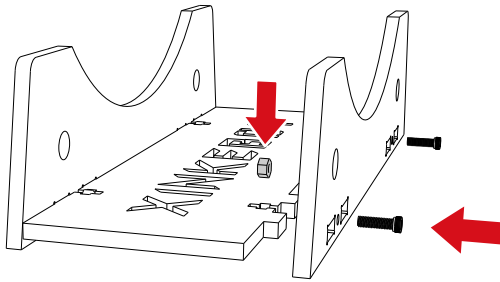


M8 bearing*4

M8 shim*4

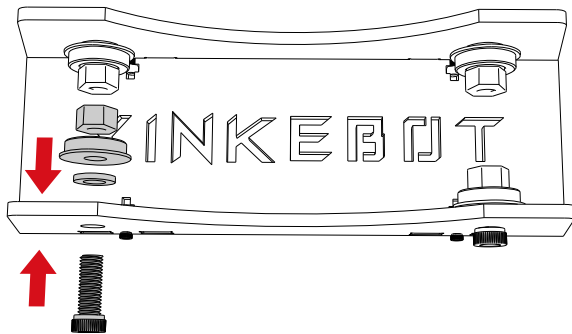
M8 screw & nut*4

1. Assembling the acrylic boards



Assemble the acrylic boards with M3 screws and nuts.
(see picture beside)

2. Installing the bearings



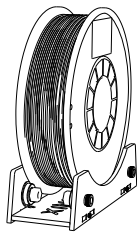
Install the bearings with M8 screws and nuts.(follow the order shown in the picture beside)

Video tutorials are available on our website:

<http://www.xinkebot.com>

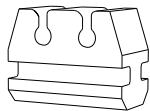
(Homepage→Support→Tutorials)

Feeding the filament into the extruder



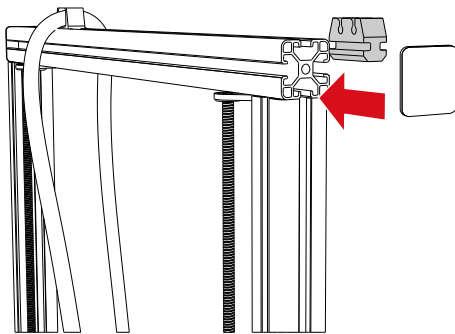
Filament Spool

Spool Holder



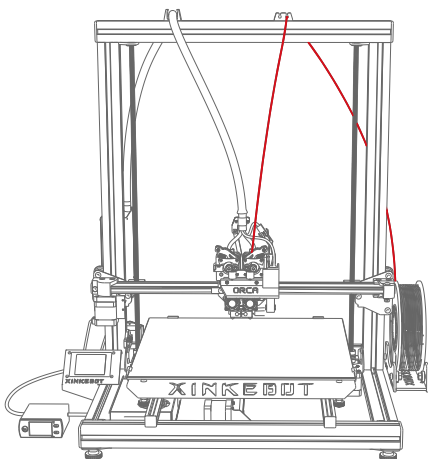
Filament Holder

1. Installing the filament holder



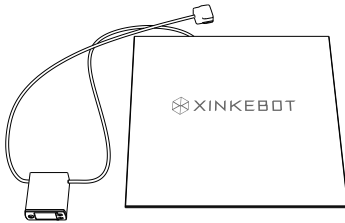
Install the filament holder in the way shown in the picture beside.

2. Feeding the filament into the nozzle



Feed the filament through the hole in the top of the extruder into the nozzle.
(see picture beside)

Installing the Heated Build Plate



heated build plate kit

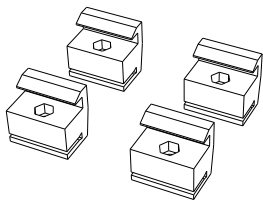
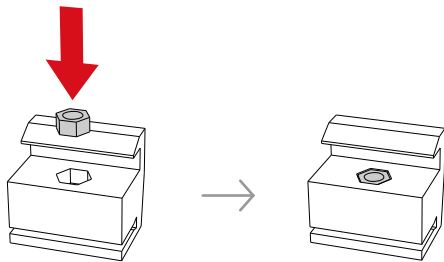
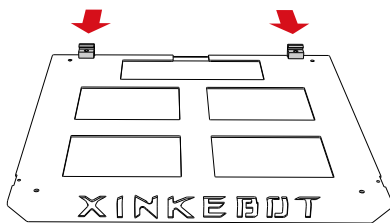


plate holders

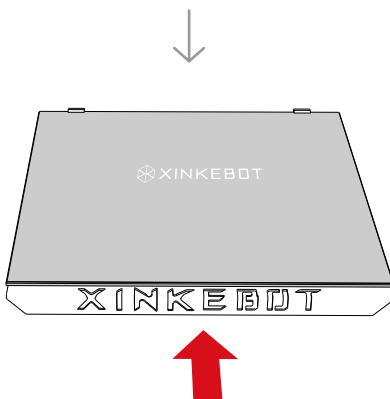
1. Installing the build plate and plate holders



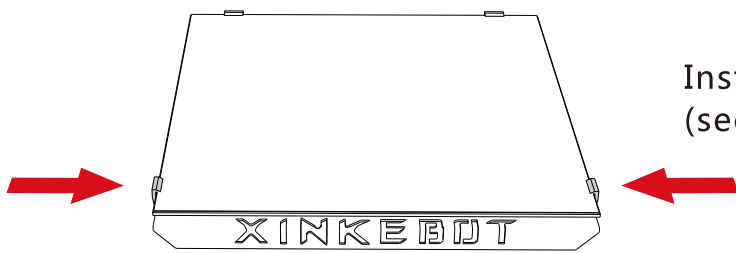
Put the M3 nuts into the hole of the plate holders.



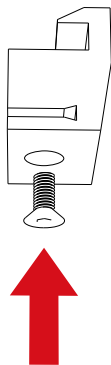
Screw the plate holders in.



Install the build plate in the direction the arrow indicates.



Install the other two plate holders.
(see picture beside)



Screw in the plate holders from the back
side of the build plate with M3 screws.
(see picture beside)

Video tutorials are available on our website:

<http://www.xinkebot.com>

(Homepage→Support→Tutorials)

Leveling the Build Plate and Printing a Model

Leveling the build plate

1. Enter the main interface, press “Tool” and then “Manual” and press the home button in the center of the display to restore to initial position.
2. Turn the knob on the back side of the build plate, adjust the space between the extruder and the build plate in the current position until the extruder press firmly on the build plate.
3. Press the arrow button with a “Z” to lift the z-axis and then install the auto leveling kit.
4. Enter the main interface, press “Tool” and then “Level” to start the auto leveling process.
5. Put back the auto leveling kit in place after leveling.

Printing a model

1. Enter the main interface, press “Print” and select a model to be printed.

Video tutorials are available on our website:

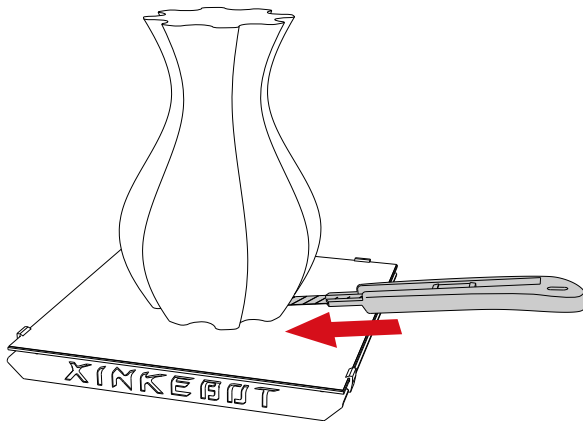
<http://www.xinkebot.com>

(Homepage→Support→Tutorials)

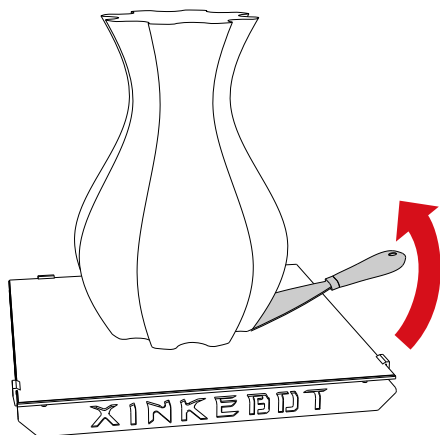
Removing the Model from the Build Plate

When you need to remove the model from the build plate after printing, be aware that doing so in a wrong way could cause damage to the model or the printer. The steps below will tell you how to correctly remove a model.

1. Pry up a corner of the model with a utility knife.



2. Put a scraper under the model and pry it up bit by bit until it totally leaves the plate.



Tips :

1. Sometimes it will be easier to pry up the model when the build plate is heated up to 50°C.
2. Do not pry up the model too hard or too fast, keep it slow.

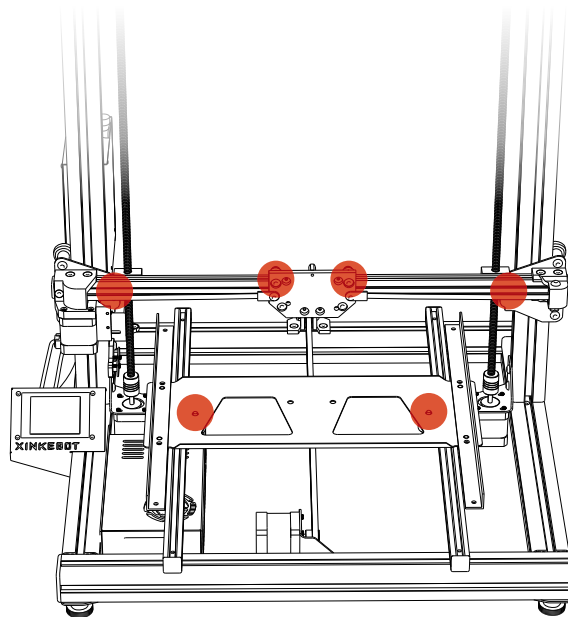
MAINTENANCE Part 3

Adjusting the Wheels

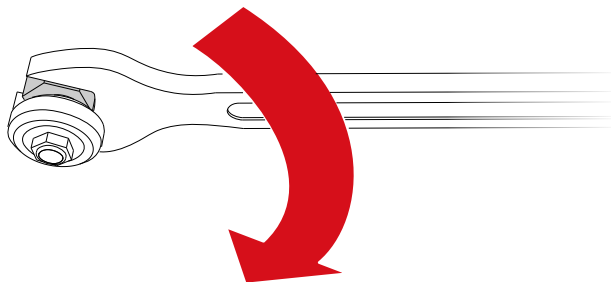
Each axis of ORCA2+ has wheels which can adjust the tightness.

After a period of time, the wheels may loose, so they need to be inspected and maintained regularly.

1. Positions of the adjusting nuts.



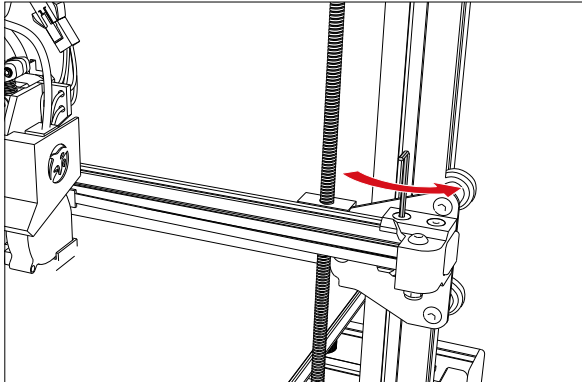
2. Use a spanner to adjust the adjusting nuts to proper tightness.



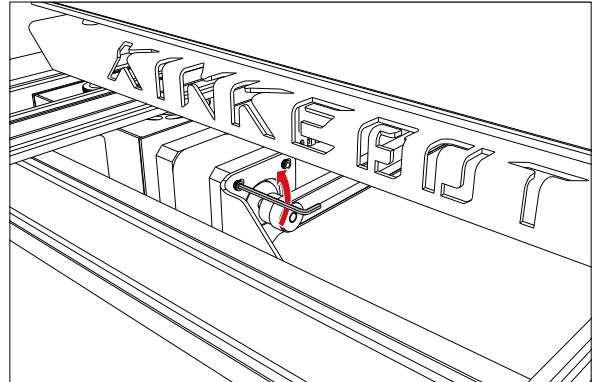
Adjusting the Belts

After a period of time, the belts may loose. Please adjust them according to the pictures below.

1. Loose the screws.

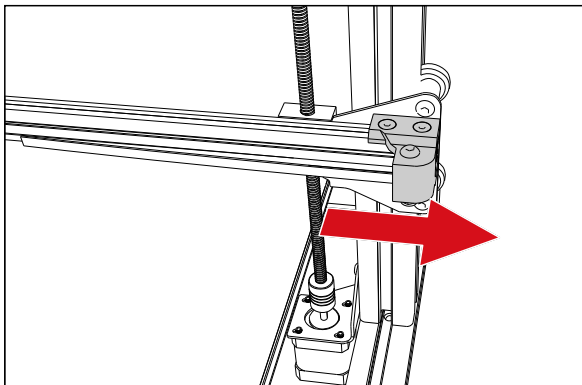


x-axis

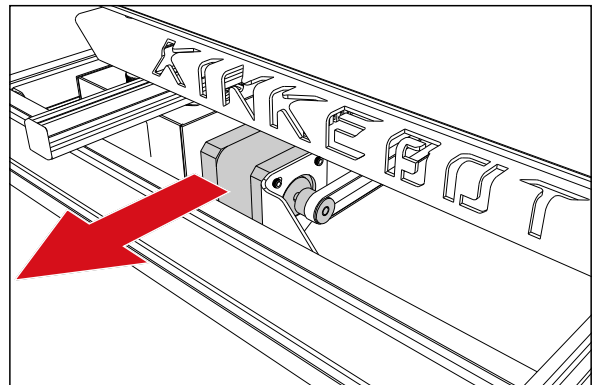


y-axis

2. Pull the belt tight.



x-axis



y-axis

3. Tighten the screws.

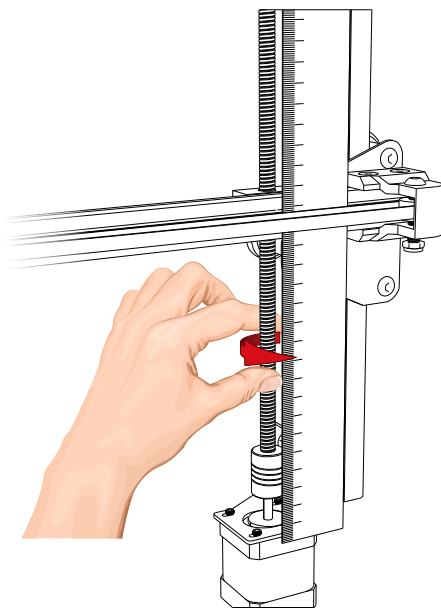
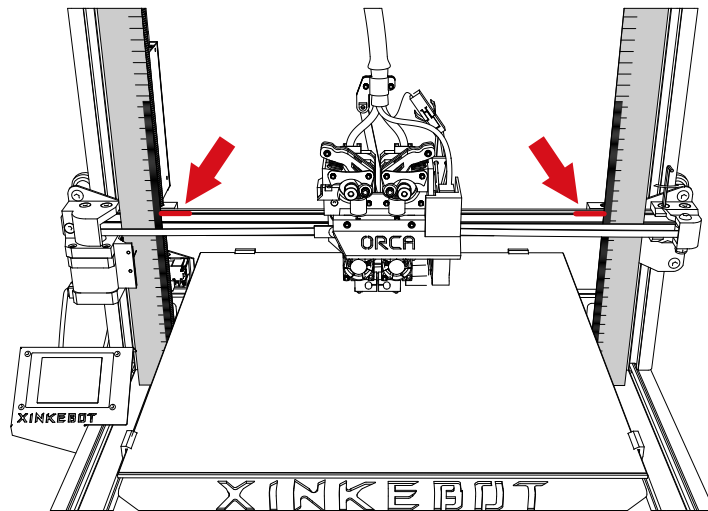
【Caution】

Please do not make the belt too tight as it will put a burden on the motor and result in a rise in temperature, which may influence the printing result and reduce the life of the printer.

Calibrating the Screw Mandrels of the Z-axis

If the screw mandrels of the z-axis wobble or make unusual noise after a period of time, please calibrate them according to the pictures below.

1. Cut off the power and measure respectively the height of the two screw mandrels of the z-axis to see if they are of the same height.



2. If not, rotate the screw mandrels to make them equal in height.

Important Safety Information

Warning If you don't operate machine according to manual, it may lead to fire, equipment damage, property loss, even personal injury. Please read manual carefully before printing.

Operation Please operate ORCA2+ carefully. The machine is made of metal, organic glasses, plastics and sensitive electronic parts. If it has been thrown, burnt, squeezed, or touched by liquid, it may be damaged. In order to avoid possible injury, please do not use damaged ORCA2+.

Maintainance Please don't disassemble or repair ORCA2+ by yourself. It may cause equipment damage or personal injury. If it occurs, please contact XINKEBOT or XINKEBOT authorised service provider.

Cord&Power Supply When connect ORCA2+ to power, please use standard power cord in accessory bag. If use damaged power cord or connect to power in damp environment, it may lead to fire, electric shock, injury or machine damage etc.

High Temperature When ORCA2+ is working, the temperature of nozzles and plate will be very high. Please do not touch above parts directly.

Squeeze ORCA2+ consists of many movable modules. Please pay attention to warning signs and do not touch these modules when printing. For example, please do not stretch your hand to heating plate.

Long exposure to high temperature ORCA2+ and its power cord comply to temperature standard and limit (15-30°C). But even within the limit, long time exposure to the heat surface may cause people feel uneasy or injury. If the machine has worked or connected with electricity for a long time, do not touch the equipment and power supply. When use ORCA2+ or connect it to electricity, please put the machine and its power cord in drafty place. Please note if your body condition effects how your body experience heat.

Important Information

1. Safety in Use

ORCA2+ only can use XINKEBOT supplied power cord, otherwise, it may cause equipment damage or fire.

To avoid risk, please do not touch nozzles, printing plate or other parts when it is printing or just finish printing.

There will be slight smell when printing, which is normal phenomenon and won't affect body, but it's still better to use machine in drafty place. When it is working, please try to keep the equipment away from strong airflow, because strong airflow may affect print quality.

2. Protection Methods

Please keep machine far away from water, otherwise, it may lead to damage.

When loading model, please do not turn off power or pull out SD card, otherwise, it may cause data loss of model.

When debugging printer, its nozzle will extrude filament, please keep 50mm distance between nozzle and printing plate at least, otherwise, it may cause choke nozzle.

When ORCA2+ is working, the room temperature should be 15-30°C, humidity should be 20%-50%. otherwise, it may cause warping at the bottom of model, decline of filament resolution, thus affect printing quality.

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