



Before you begin on your journey, a word of caution.
This machine can maim, burn, and electrocute you if you are not careful.
Please do not become the first XUUNDA fatality.
There is no special Reddit flair for that.

Please, read the entire manual before you start assembly.

As you begin wrenching, please check our Social media channels for
any tips and questions that may halt your progress.

Most of all, good luck!

The XUUNDA Team

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PART PRINTING SETTINGS AND GUIDELINES

The XundaTeam has provided the following print guidelines for you to follow in order to have the best chance at success with your parts. There are often questions about substituting materials or changing printing standards, but we recommend you follow these.

3D PRINTING PROCESS

Fused Deposition Modeling (FDM)

INFILL TYPE

Grid, Gyroid, Honeycomb, Triangle or Cubic

MATERIAL

ABS/ASA

INFILL PERCENTAGE

Recommended: 40%

LAYER HEIGHT

Recommended: 0.2mm

WALL COUNT

Recommended: 4

EXTRUSION WIDTH

Recommended: Forced 0.4mm

SOLID TOP/BOTTOM LAYERS

Recommended: 5

FILE NAMING

By this time you should have already downloaded our STL files from the Zopah website/ GitHub repository. You might have noticed that we have used a unique naming convention for the files. This is how to use them.

PRIMARY COLOR

B_Frame_x1.stl

These files will have nothing at the start of the filename.

ACCENT COLOR

[a]_Tensioner_x2.stl

We have added “[a]” to the front of any STL file that is intended to be printed with accent color. The parts are marked with a heart in the man-

CLEAR / TRANSLUCENT

[c]_Display_screen_x1.stl

Any file that begins with [c] is intended to be printed in a clear or translucent color that allows light to penetrate through it.

QUANTITY REQUIRED

[a]_Hex_Bolt_x3.stl

Any file that ends with “_x#” is telling you the quantity of that part required to build the machine.

STL FILE LIST

We have put together a comprehensive list of all the STL files used in this manual you can use this to keep track of parts you have printed, identify the names of printed parts, and/or reference where they are used in the body of this manual. Simply copy the document from the link and you can markup a local copy for yourself: <https://www.zopahuganda.com>.



<https://zopahuganda.com>

HOW TO GET HELP

If you need assistance with your build, we're here to help. Head on over to our Social media platforms and post your questions. This is our primary medium to help Xunda Users and we have a great community that can help you out if you get stuck.



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REPORTING AN ISSUE

Should you find an issue in the documentation or have a suggestion for an improvement please consider opening an issue on GitHub. When raising an issue please include the relevant page numbers and a short description; annotated screenshots are also very welcome. We periodically update the manual based on the feedback we get.

THIS IS JUST A REFERENCE

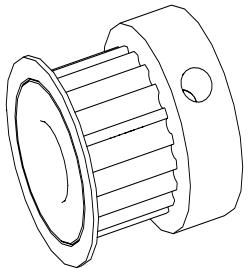
This manual is designed to be a simple reference manual. Building a Xunda can be a complex endeavour and for that reason we recommend downloading the CAD files off our Repository/ website if there are sections you need clarification on. It can sometimes be easier to follow along when you have the whole assembly in front of you.



<http://bit.ly/3XMdTpp>

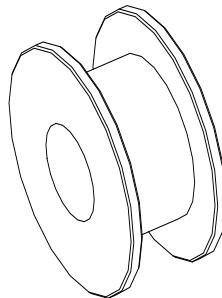
HARDWARE - REFERENCES

www.zopahuganda.com



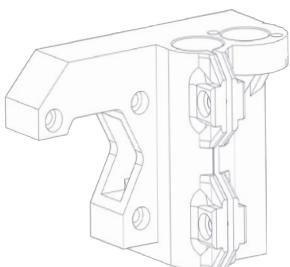
PULLEY

GT2 pulley used on the motion system of the Xunda



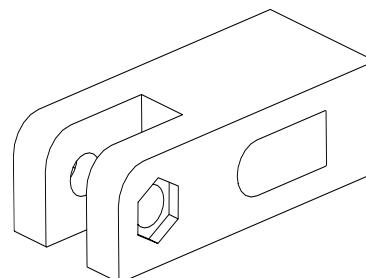
BEARING

Belt bearing used on the motion system of the Xunda at the opposite ends the motors



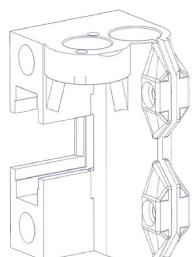
PRINTED PART

X-axis end motor holder used to hold the motor for the motion in the x-axis



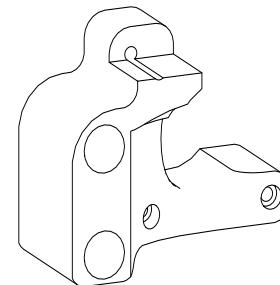
Y-IDLER

Y-idler is used to hold belt bearing for the motion in the y-axis



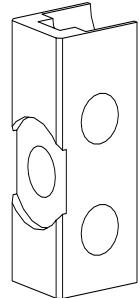
PRINTED PART

X-axis end idler used to hold the bearing for the x-axis belt



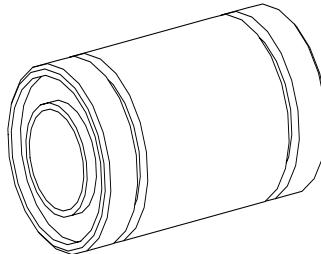
MOTOR HOLDER

The motor holds the y-axis motor used in the y-axis



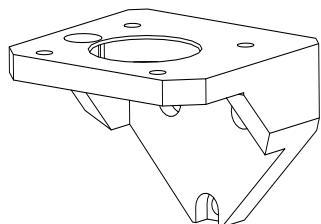
Y-AXIS HOLDER

Y-axis holder is used to hold the threaded rods (tige 390mm and tige 220mm)



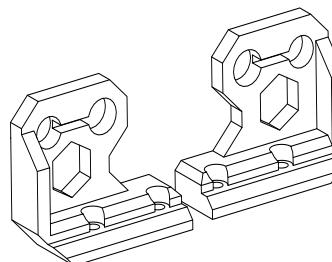
LINEAR BEARING

Used on smooth rods to provide smooth motion in different axes. For example, motion for the extruder and the heating head



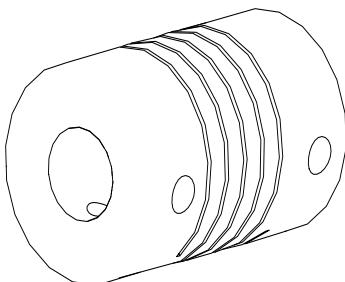
MOTOR HOLDER

This is a printed part for holding the z-axis motor used for the z-motion



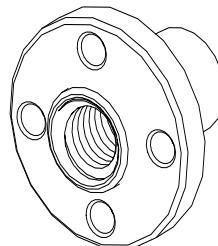
TOP COVERS

Z-axis top covers hold the Trapezoidal and the smooth rods top ends to prevent vibration in the z-axis



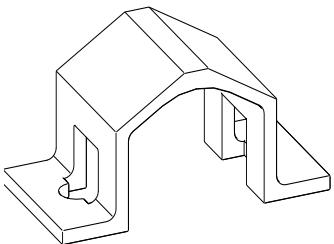
FLEXIBLE COUPLER

The flexible coupler used for joining the trapezoidal rods to the z-axis motor shaft



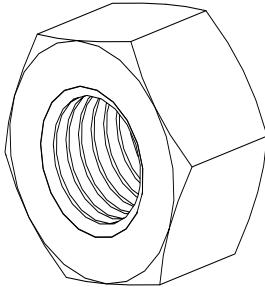
TRAPEZOIDAL NUT

Used to attach the x-axis onto the Trapezoidal rods



BEARING CLIP

The clips are used for holding the linear bearings for the bed



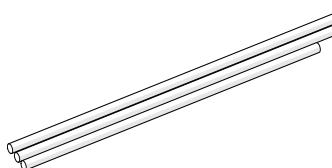
HEX NUT

Hex nuts couple with bolts to create a tight, secure joint. You'll see these used in both M10 and M3 variants throughout this guide.



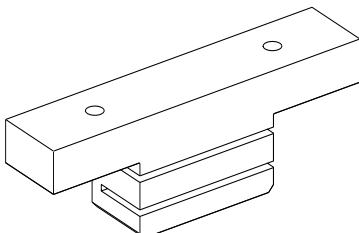
THREADED RODS

These are used in all axes of motion of the xunda printer. They include, Trapezoidal lead(middle), Tige filete 390 (longest), and Tige filete 220 (shortest)



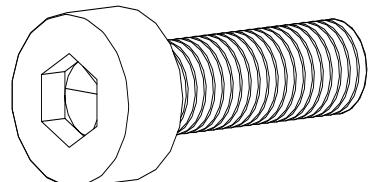
SMOOTH RODS

Used in different axes for motion. For example, tige 370 for the E-axis, tige 350 for the Y-axis, and tige 320 for the Z-axis



BELT HOLDER

The belt holder is used to hold the y-axis belt to the bed for motion

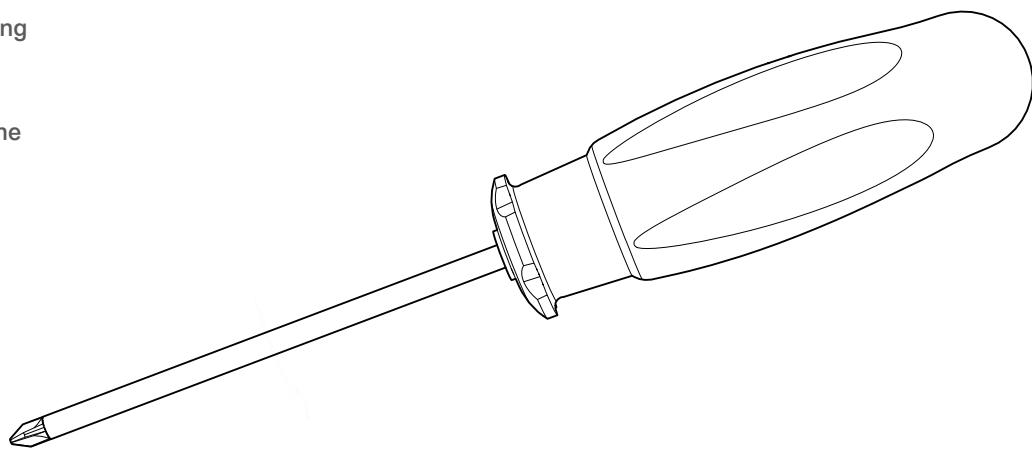


SOCKET HEAD CAP SCREW (SHCS)

Metric fastener with a cylindrical head and hex drive. The most common fastener used on the

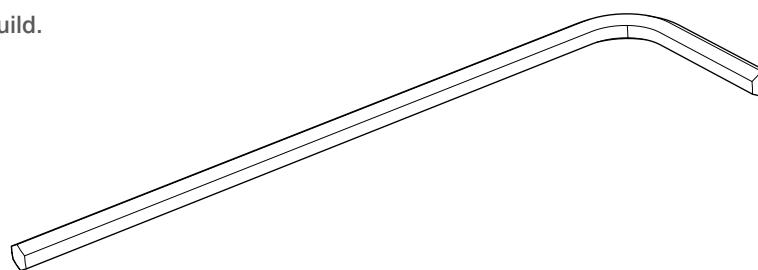
CROSS SCREW DRIVER

This will be essential for tightening and loosening screws that hold various parts of the printer together. It's used extensively throughout the assembly process to secure components like the frame, motors, and electronics.



HEX DRIVER

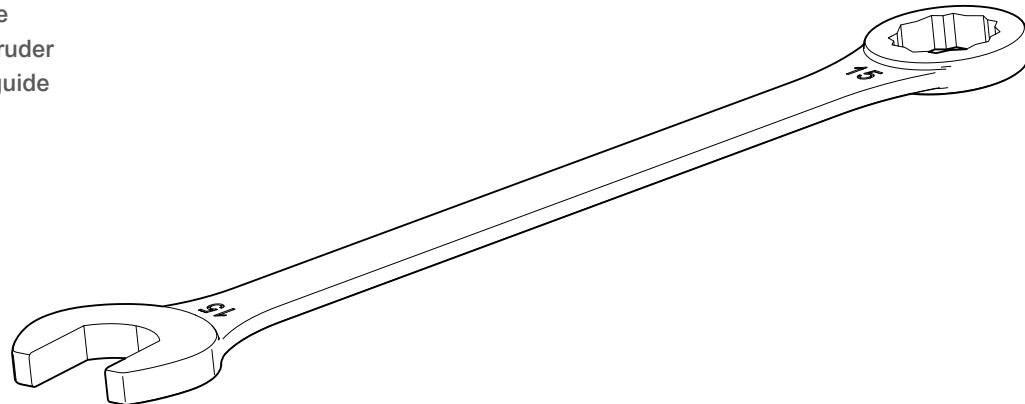
The 2mm hex driver will see a lot of use in this build. A quality driver is strongly recommended.



WRENCH

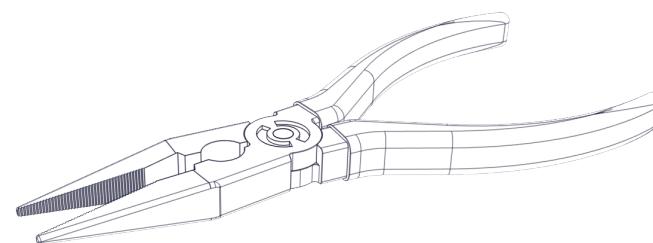
Used to secure nuts, particularly in assembling the frame and attaching components like the motors and bearings.

Can also be used to hold or adjust parts like the heater block or nozzle when fine-tuning the extruder assembly. The commonly used wrench in this guide is the 15mm size



NEEDLE NOSE PLIER

These are indispensable in assembling the printer for their precision in handling small components, wire management, and accessing tight spaces.



Y-AXIS ASSEMBLY

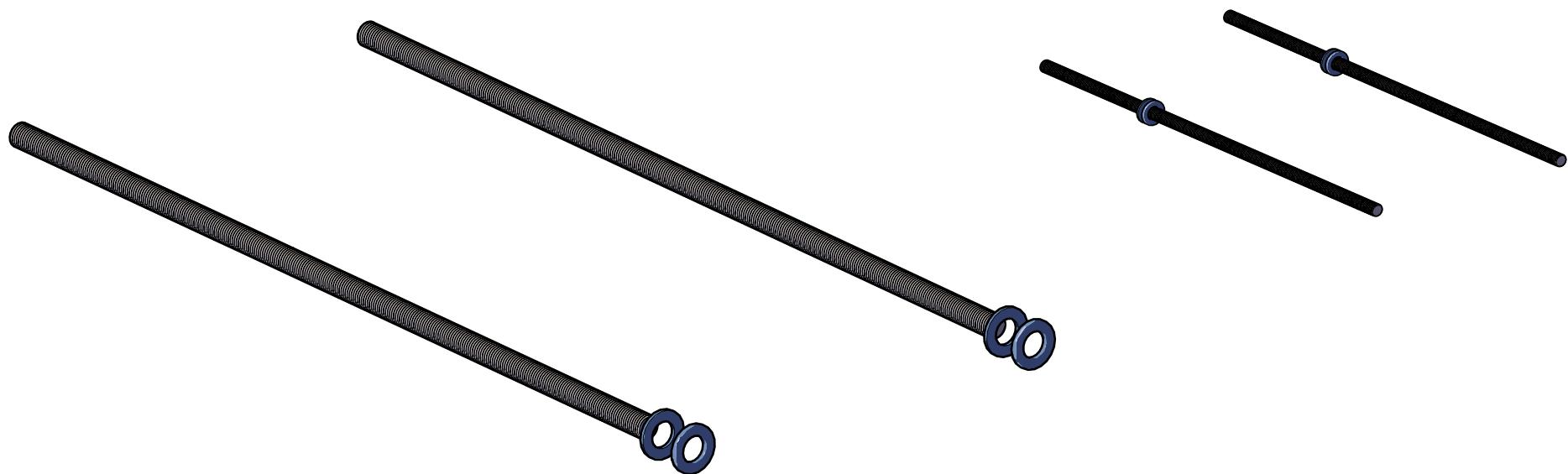
www.zopahuganda.com



Washers x4

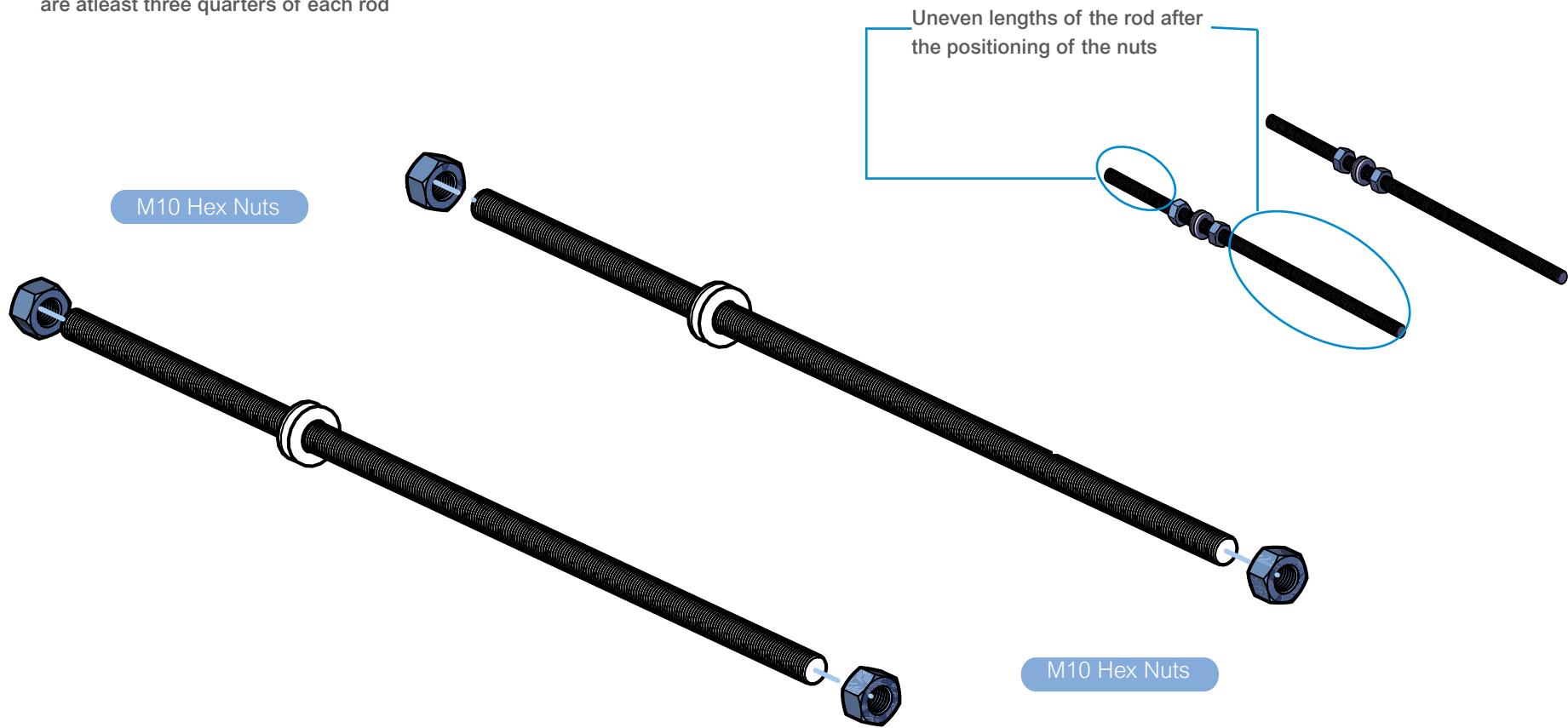
POPULATING THREADED RODS

Depending on the size of the rods, tige filete (390mm),
select washers and fit them on to the rods



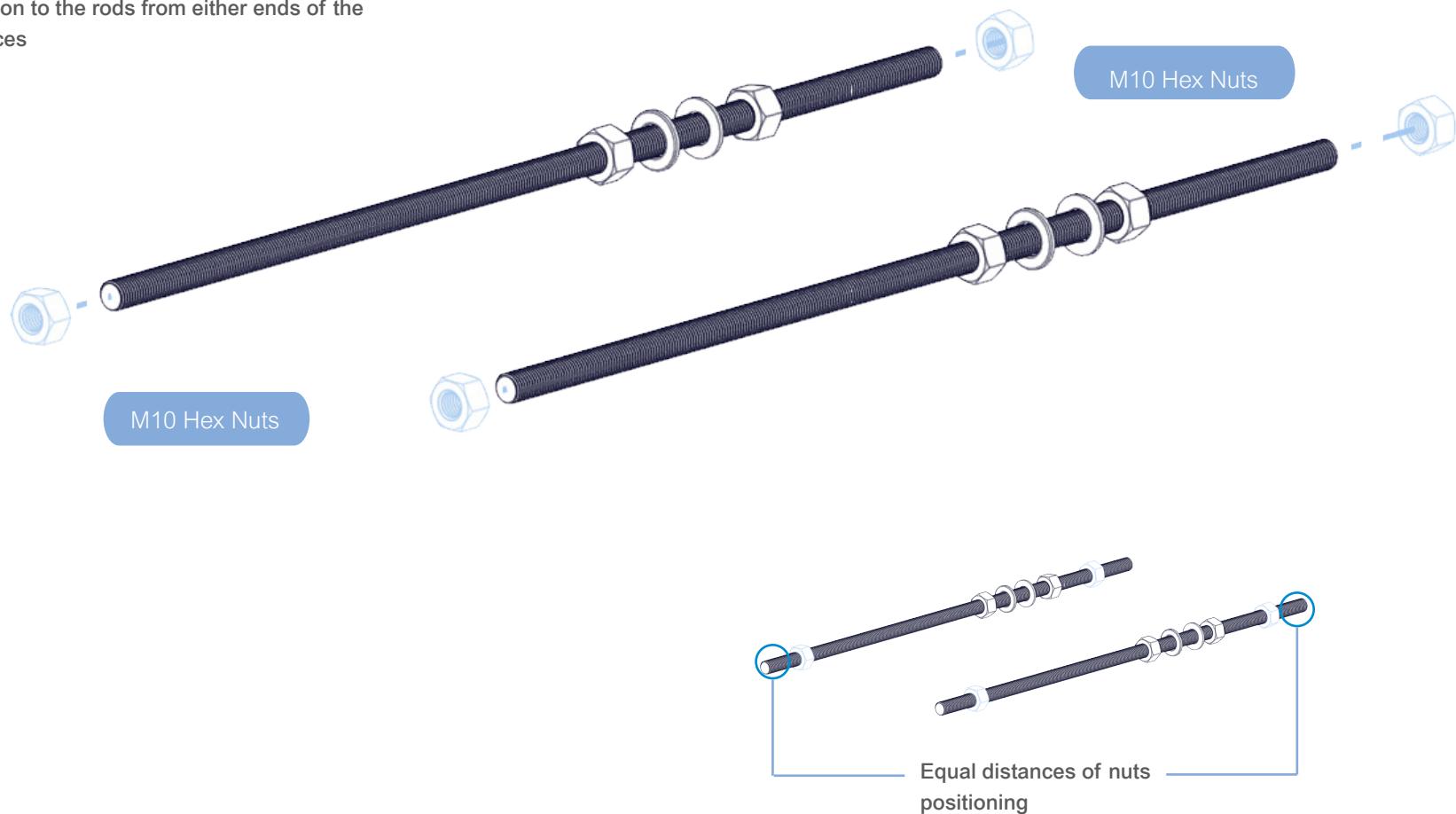
POPULATING THREADED RODS

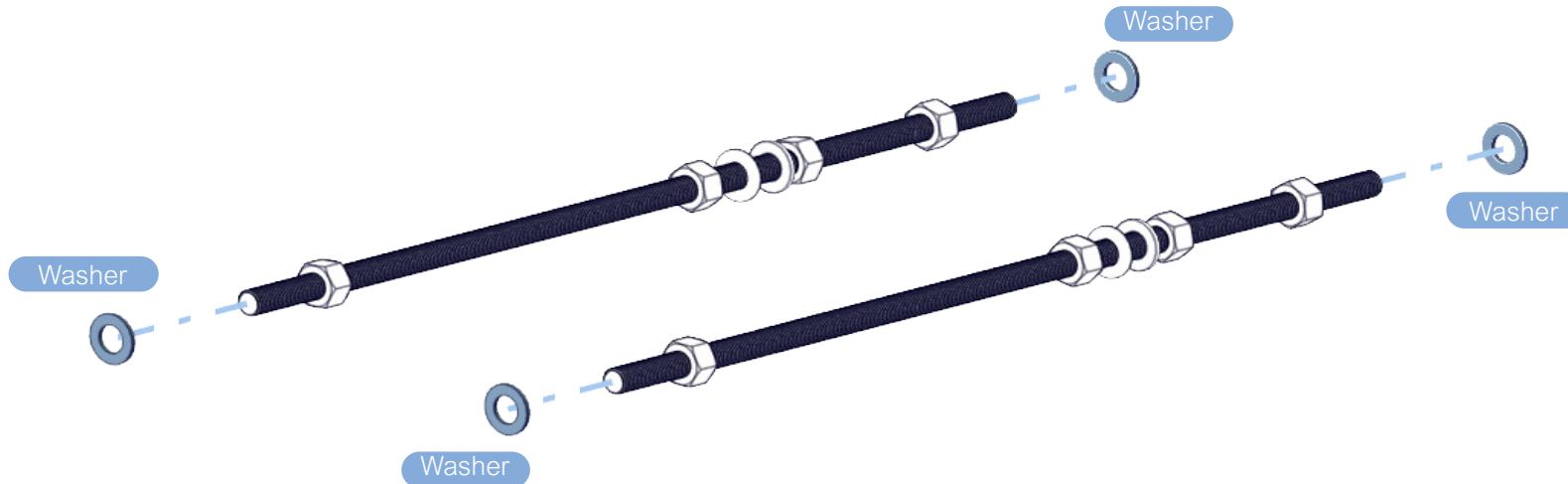
Insert M10 Hex nuts from both ends of the rods until they are atleast three quarters of each rod



POPULATING THREADED RODS

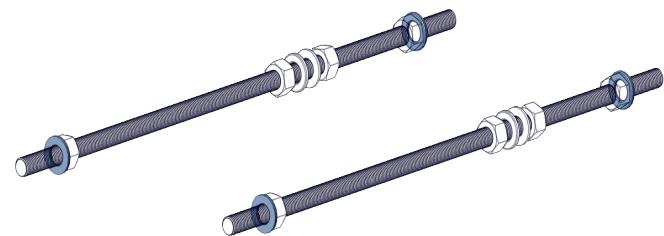
Insert M10 hex nuts on to the rods from either ends of the rods at equal distances





POPULATING THREADED RODS

Now select four right size washers from the kit and insert them each from either ends of the rods

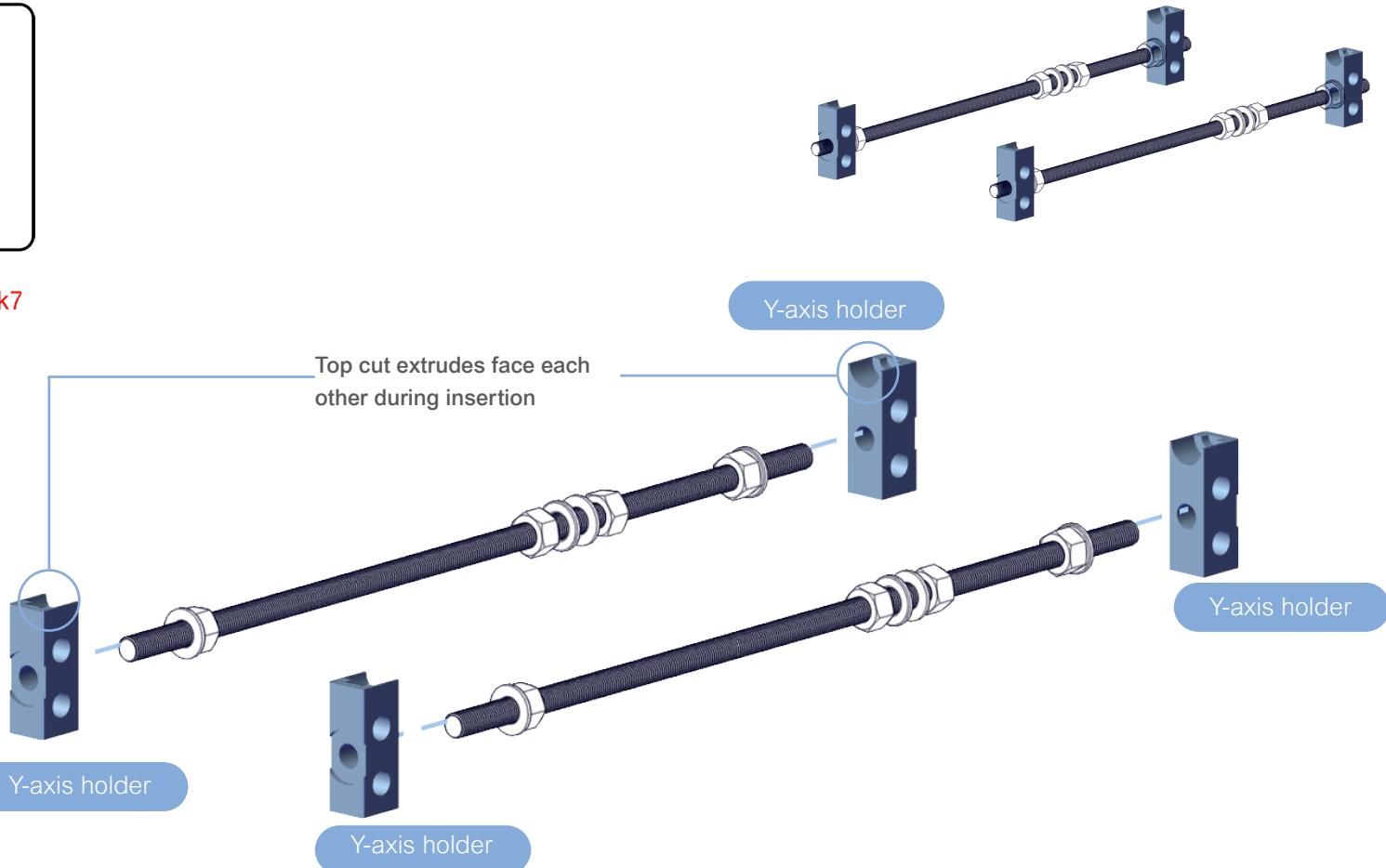


Y-AXIS HOLDER MOUNTING

Mount y-axis holders each from the ends of the rods with each top cut extrude facing towards the rod

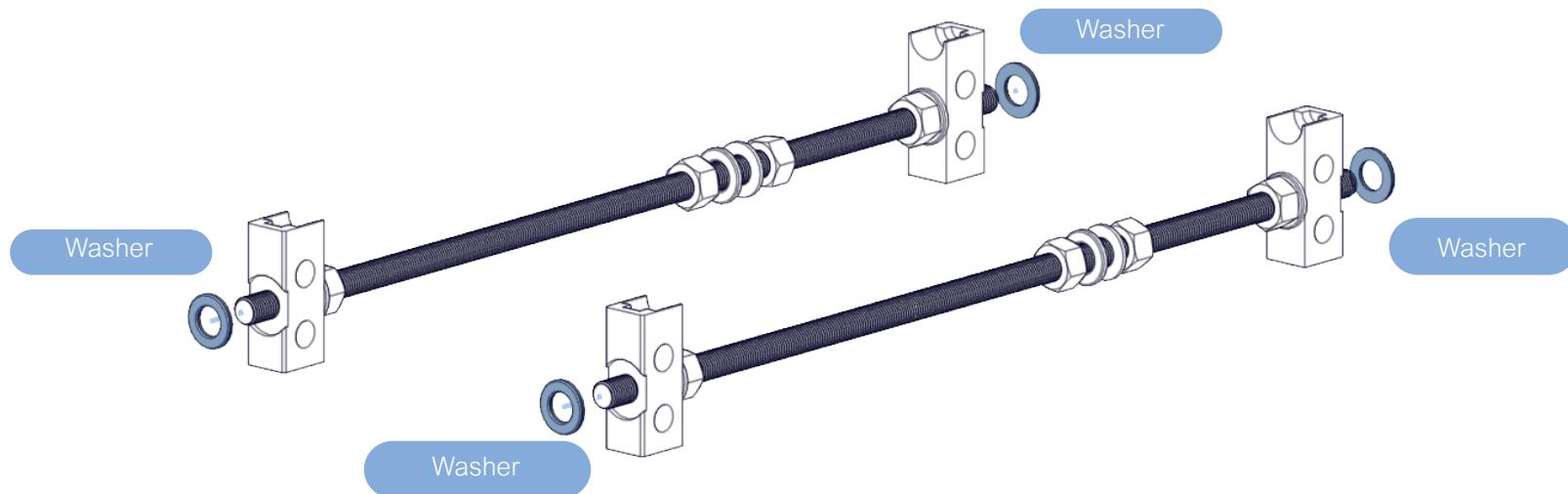
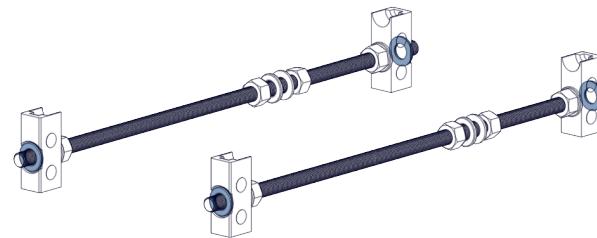


<https://bit.ly/3Edvik7>

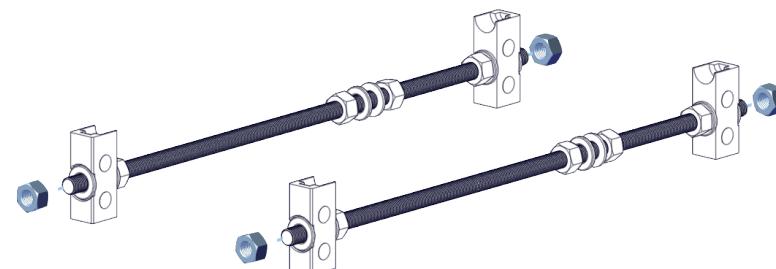


Y-AXIS HOLDER TIGHTENING

Insert washers from each end of the rods onto the y-axis holders

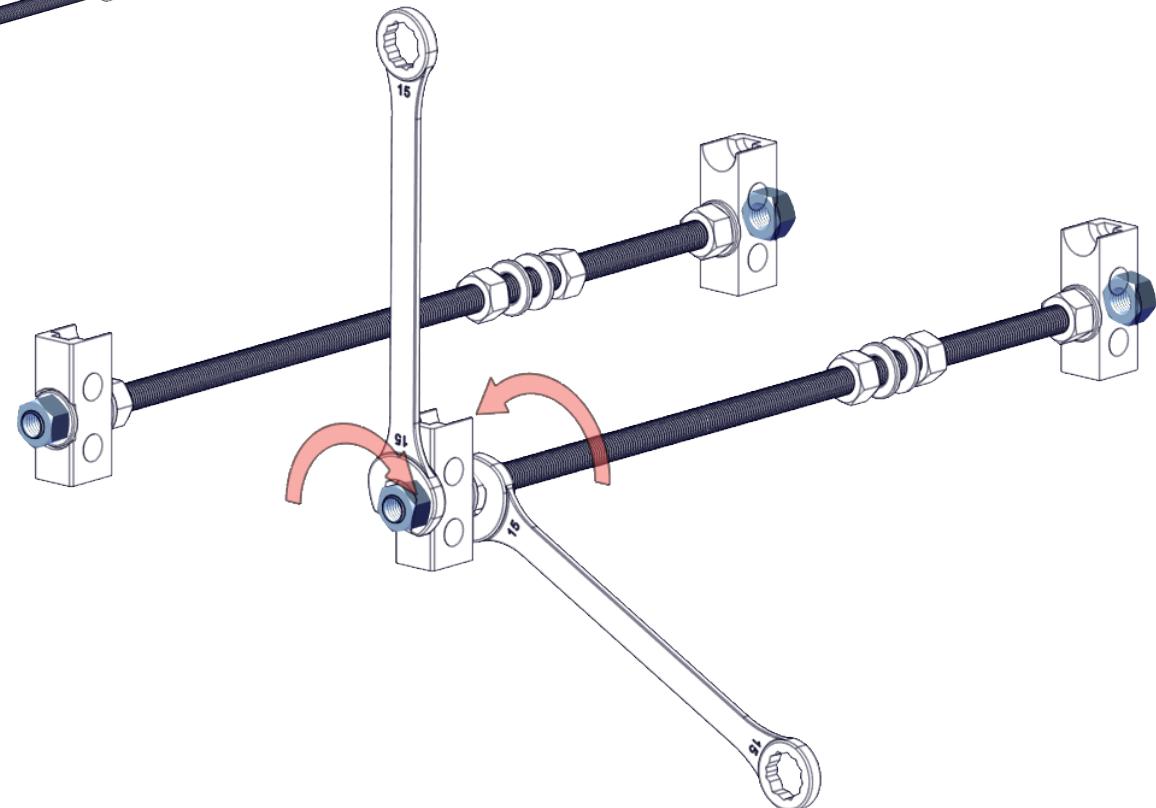


M10 Hex Nuts x4



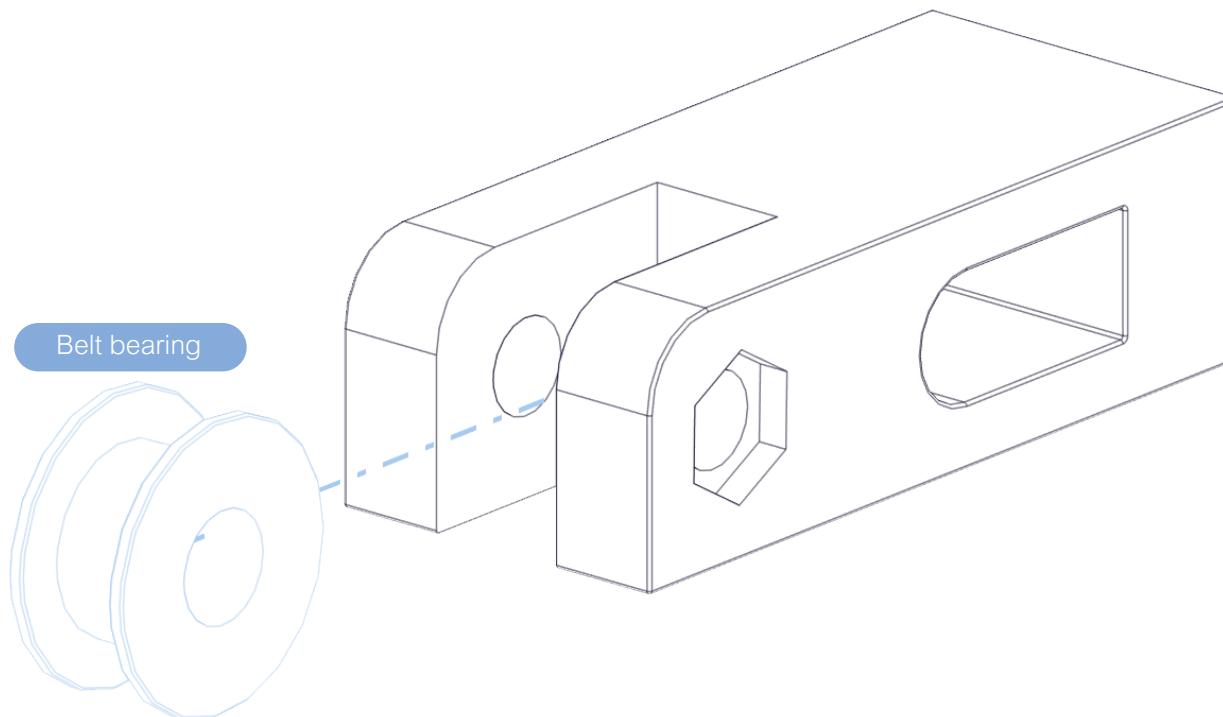
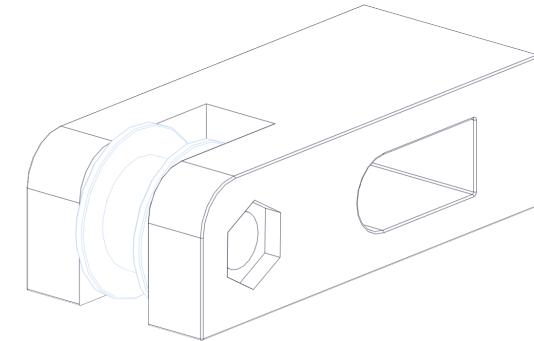
Y-AXIS HOLDER TIGHTENING (...1A)

Secure the y-axis holders in place with M10 hex nuts using wrenches/ spanners



ATTACHING THE BELT BEARING

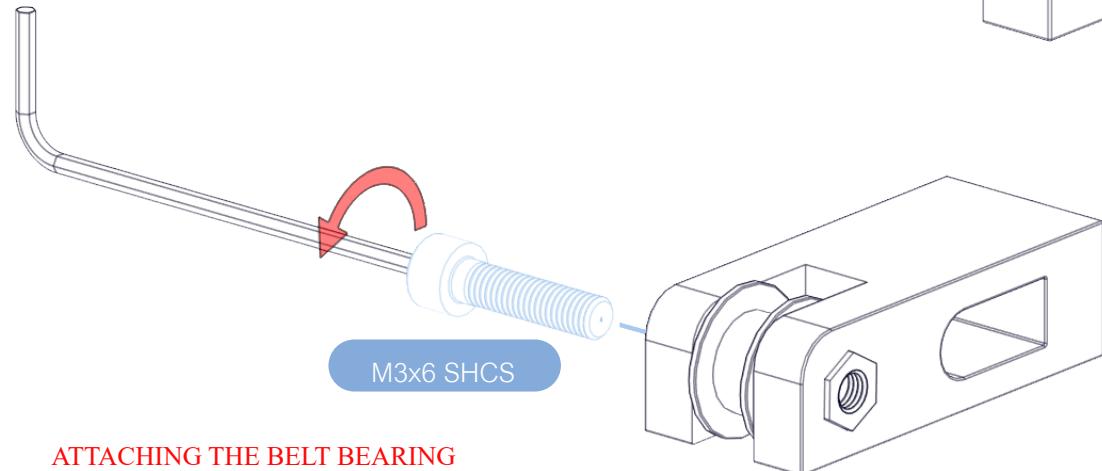
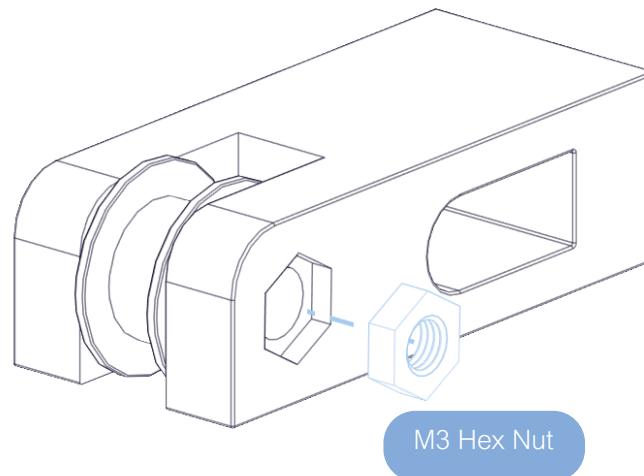
Insert the belt bearing into the hollow section of the belt idler. Ensure that it aligns with the bolt and nut holes on the idler



<https://bit.ly/42lrG7S>

ATTACHING THE BELT BEARING

Insert M3 hex nut into the nut space on the y-axis idler



ATTACHING THE BELT BEARING

Insert M3 SHCS into the bolt space on the y-axis idler

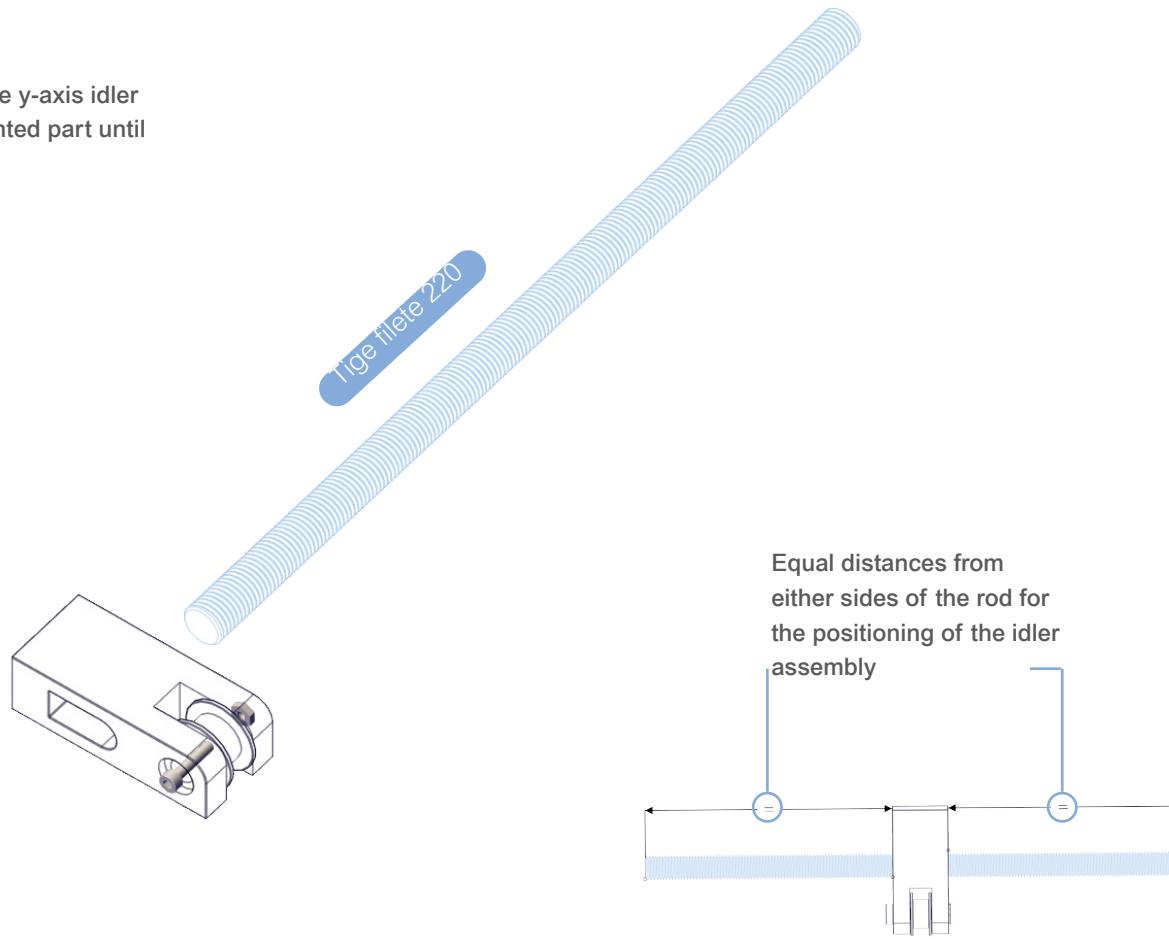


TIGHTEN GENTLY

With the help of your index finger, rotate the belt bearing after securing it in place. This is aimed at making sure that the bearing rotates freely to ensure smooth movement of the belt during the Y-axis motion

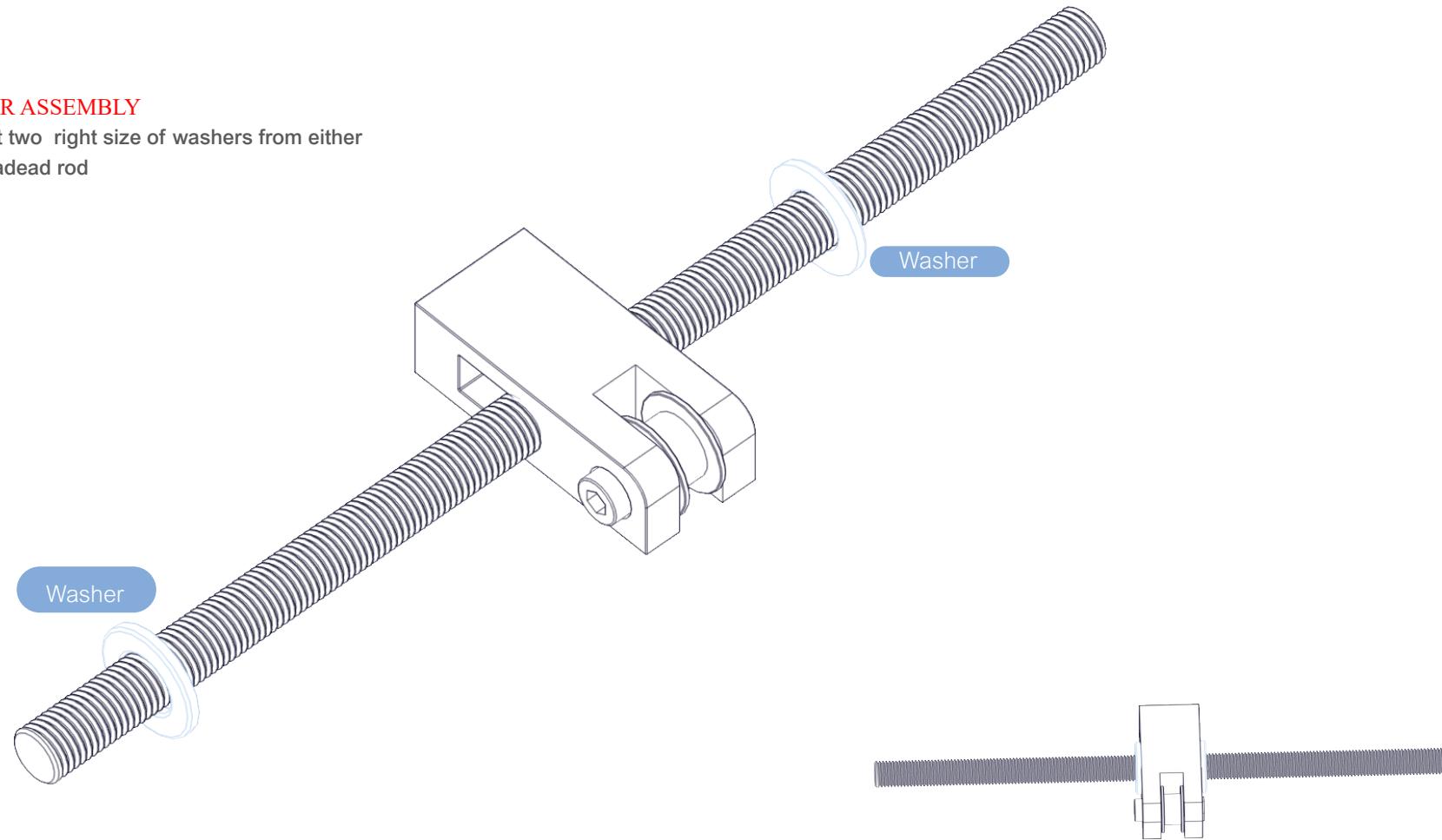
THREADED ROD INSERTION

Gently slide the tige filete threaded rod into the y-axis idler assembly through the opening of the idler printed part until it's halfway.

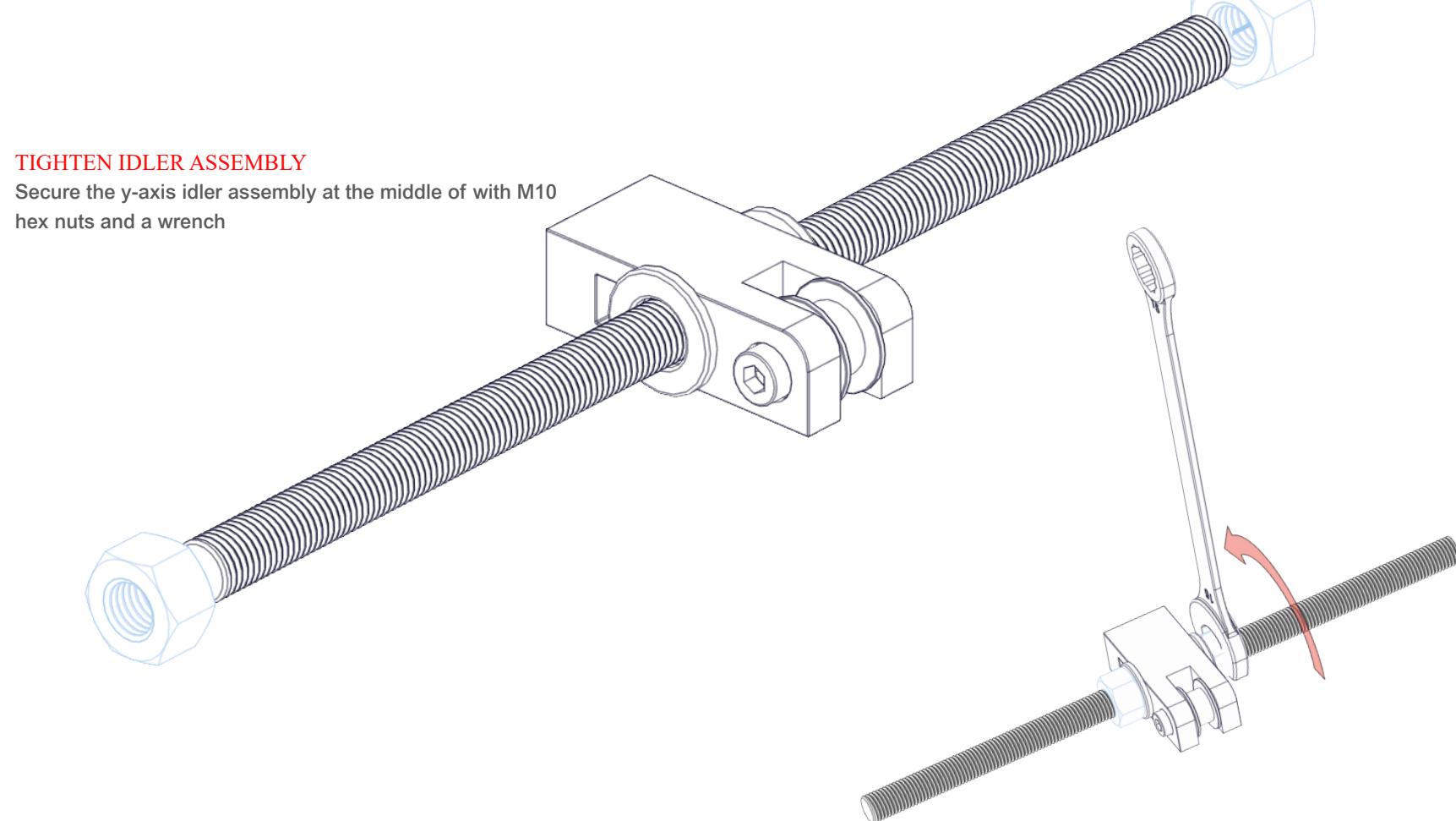


TIGHTEN IDLER ASSEMBLY

Select and insert two right size of washers from either ends of the threadead rod



M10 Hex Nuts x2

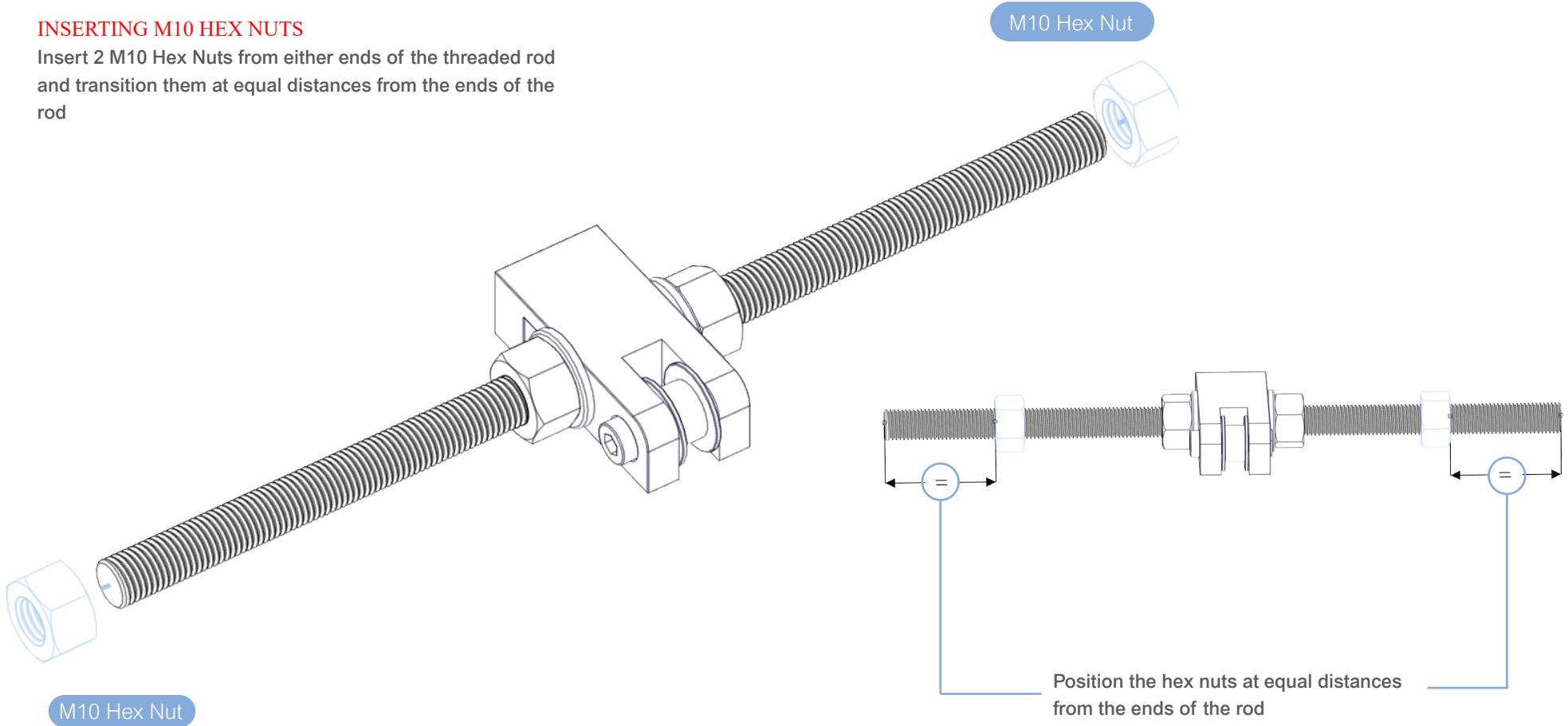


TIGHTEN IDLER ASSEMBLY

Secure the y-axis idler assembly at the middle of with M10 hex nuts and a wrench

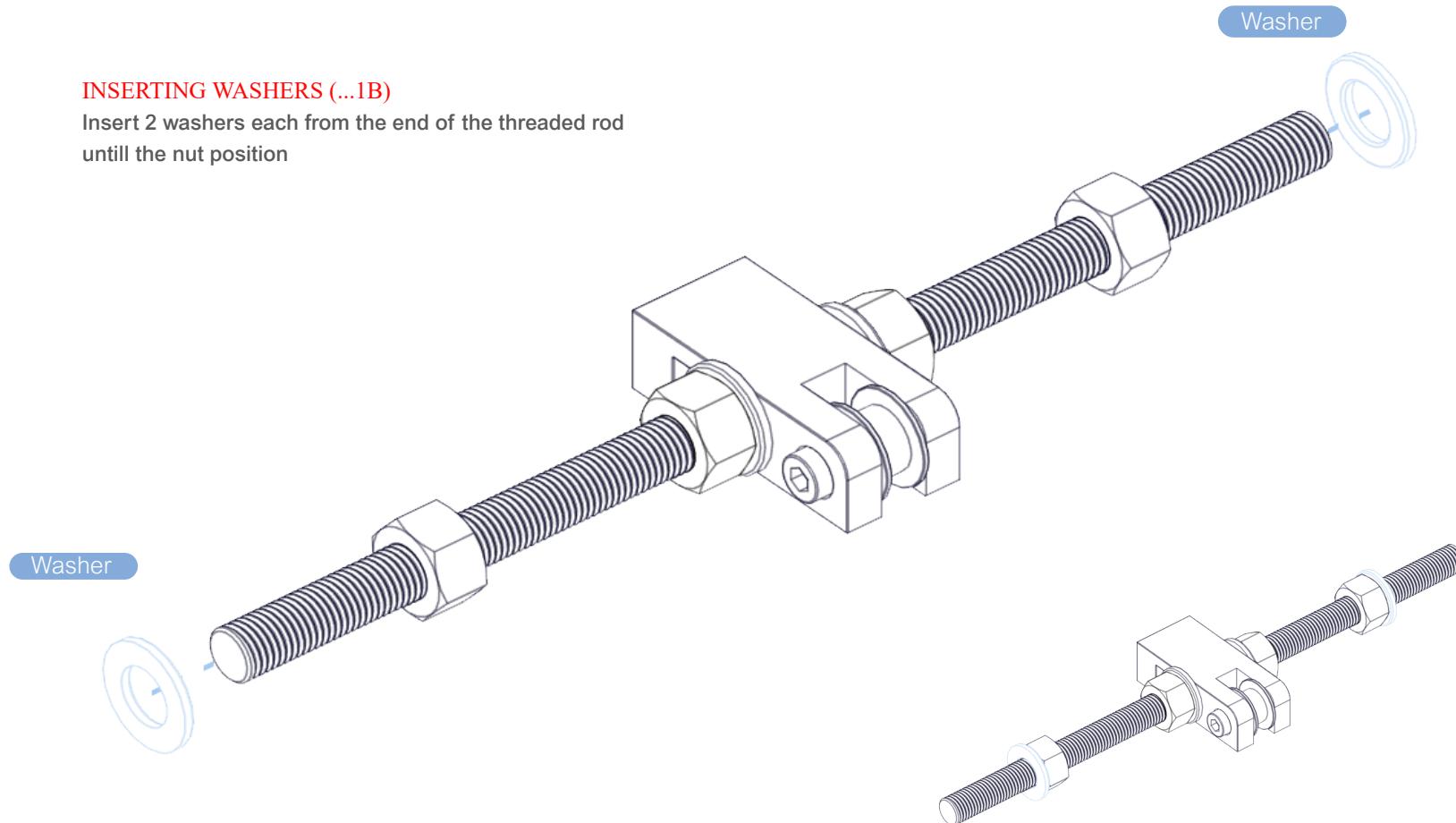
INSERTING M10 HEX NUTS

Insert 2 M10 Hex Nuts from either ends of the threaded rod and transition them at equal distances from the ends of the rod



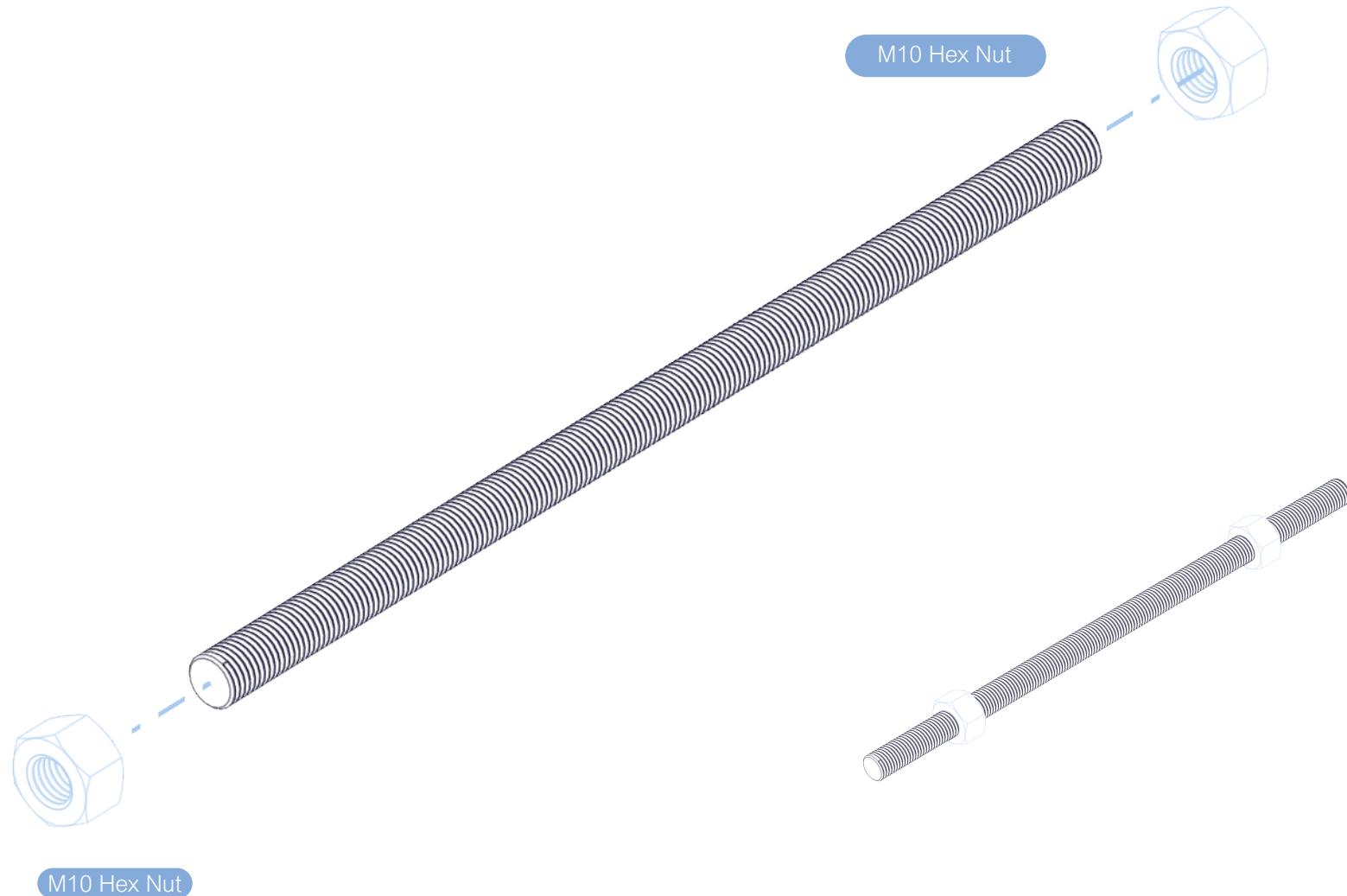
INSERTING WASHERS (...1B)

Insert 2 washers each from the end of the threaded rod
until the nut position



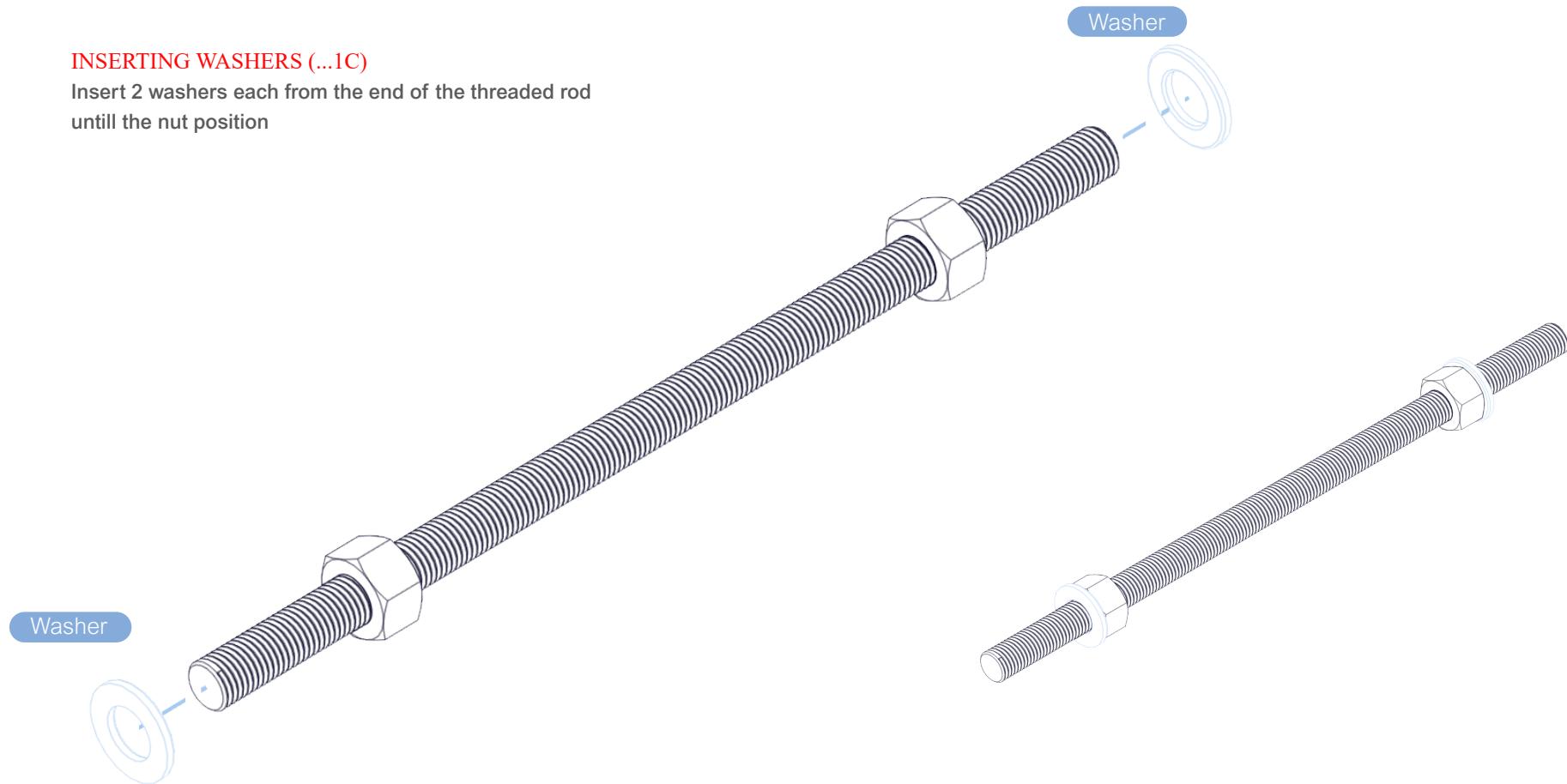
INSERTING M10 HEX NUTS

Insert 2 M10 Hex Nuts from both ends of another tige filete
220 at equal distances



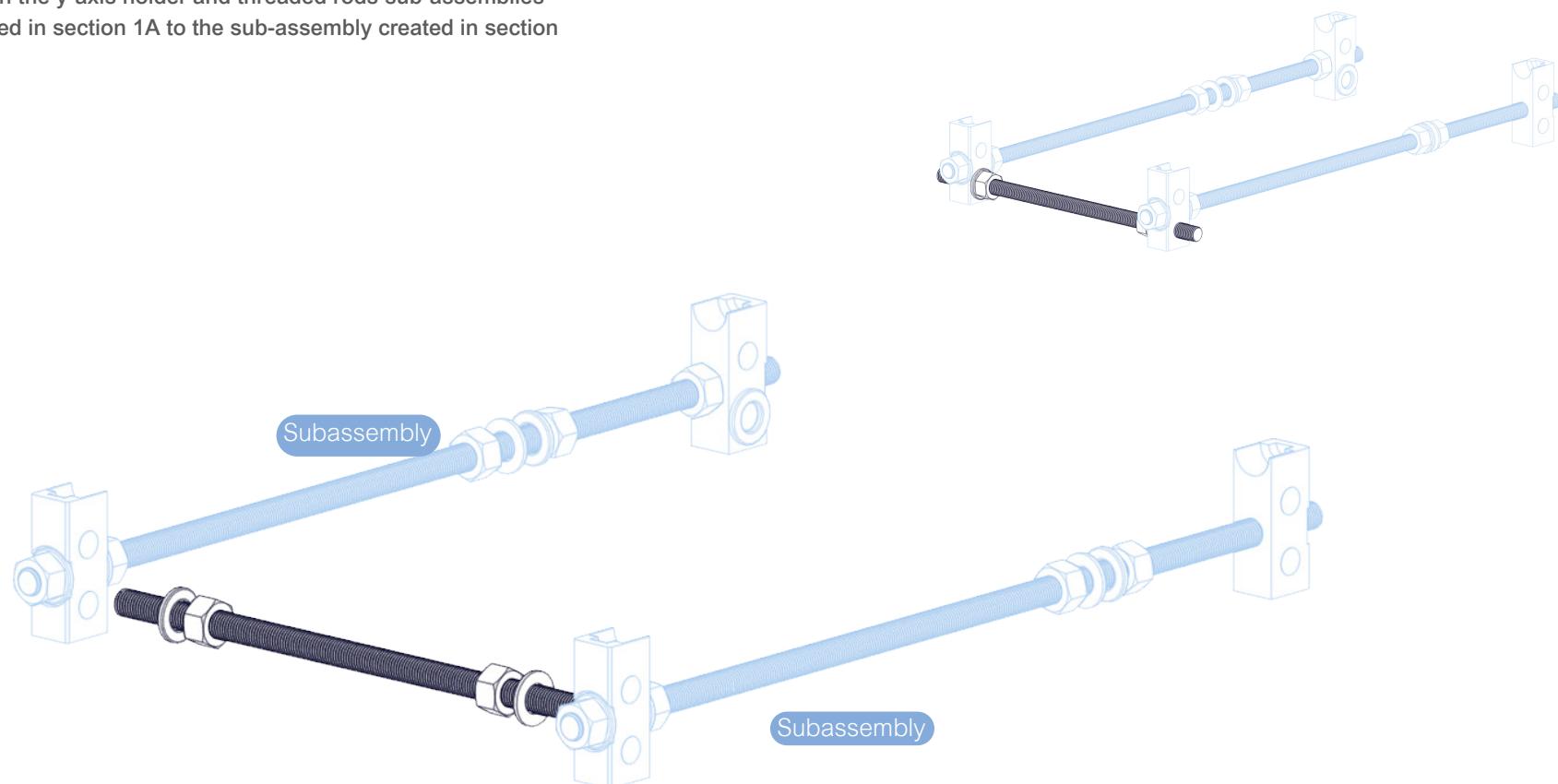
INSERTING WASHERS (...1C)

Insert 2 washers each from the end of the threaded rod
until the nut position



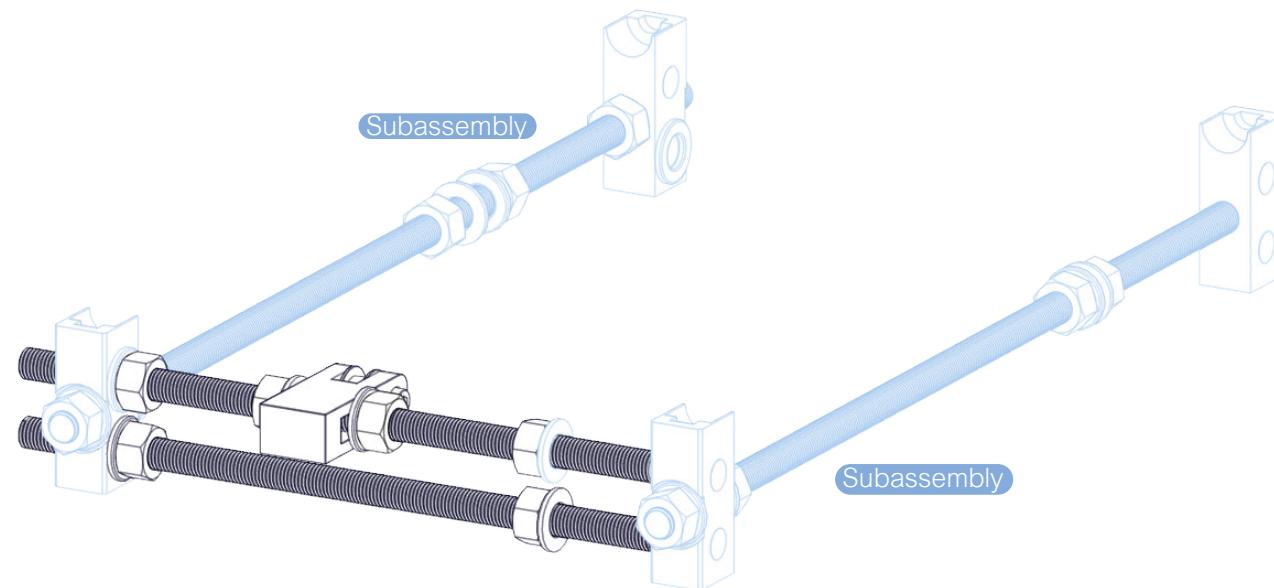
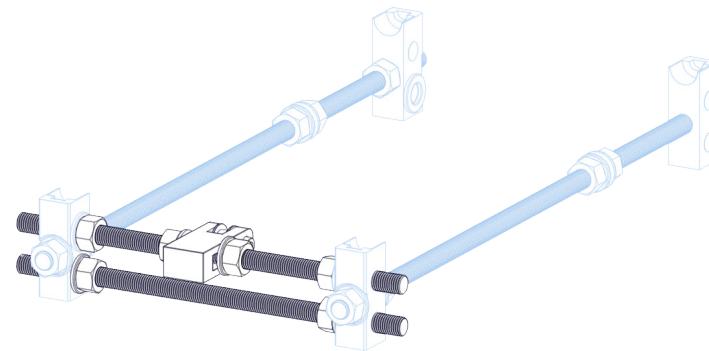
ATTACHING SUB-ASSEMBLY

Attach the y-axis holder and threaded rods sub-assemblies created in section 1A to the sub-assembly created in section 1C



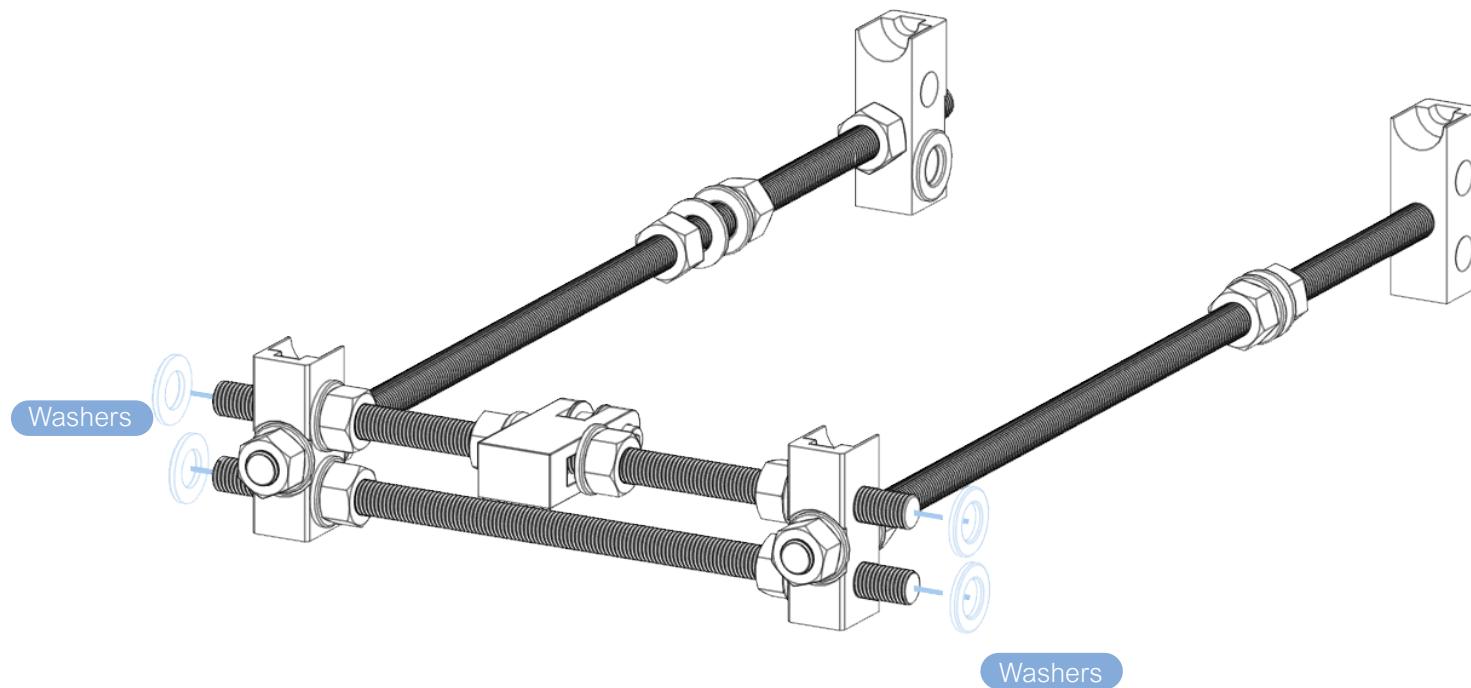
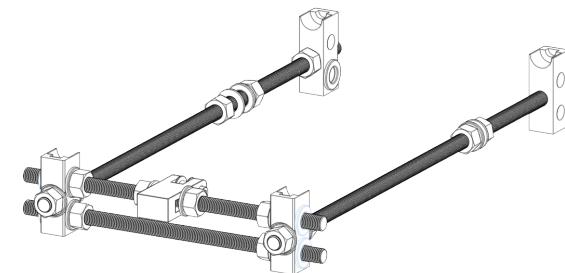
ATTACHING SUB-ASSEMBLY

Attach the belt idler and threaded rod sub-assembly created in section 1B



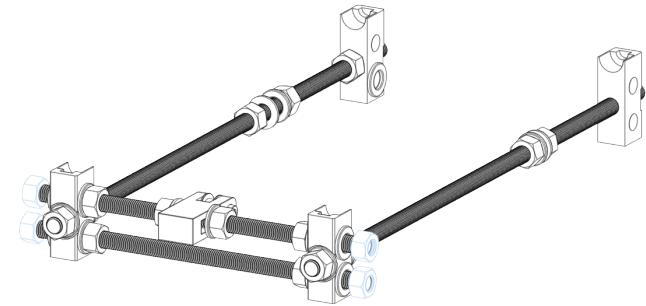
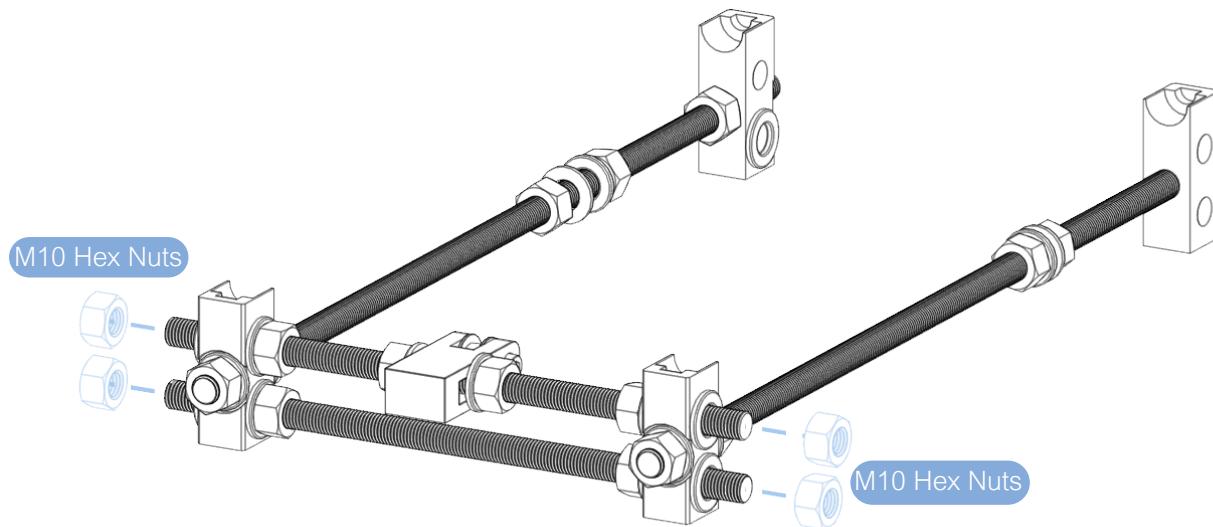
INSERTING WASHERS

Insert washers from the end of each threaded rod until the y-axis holder surface



INSERTING M10 HEX NUTS (...1D)

Insert 4 M10 Hex Nuts two from both ends of each tie filete 220 a few turns to of the nuts onto the rods

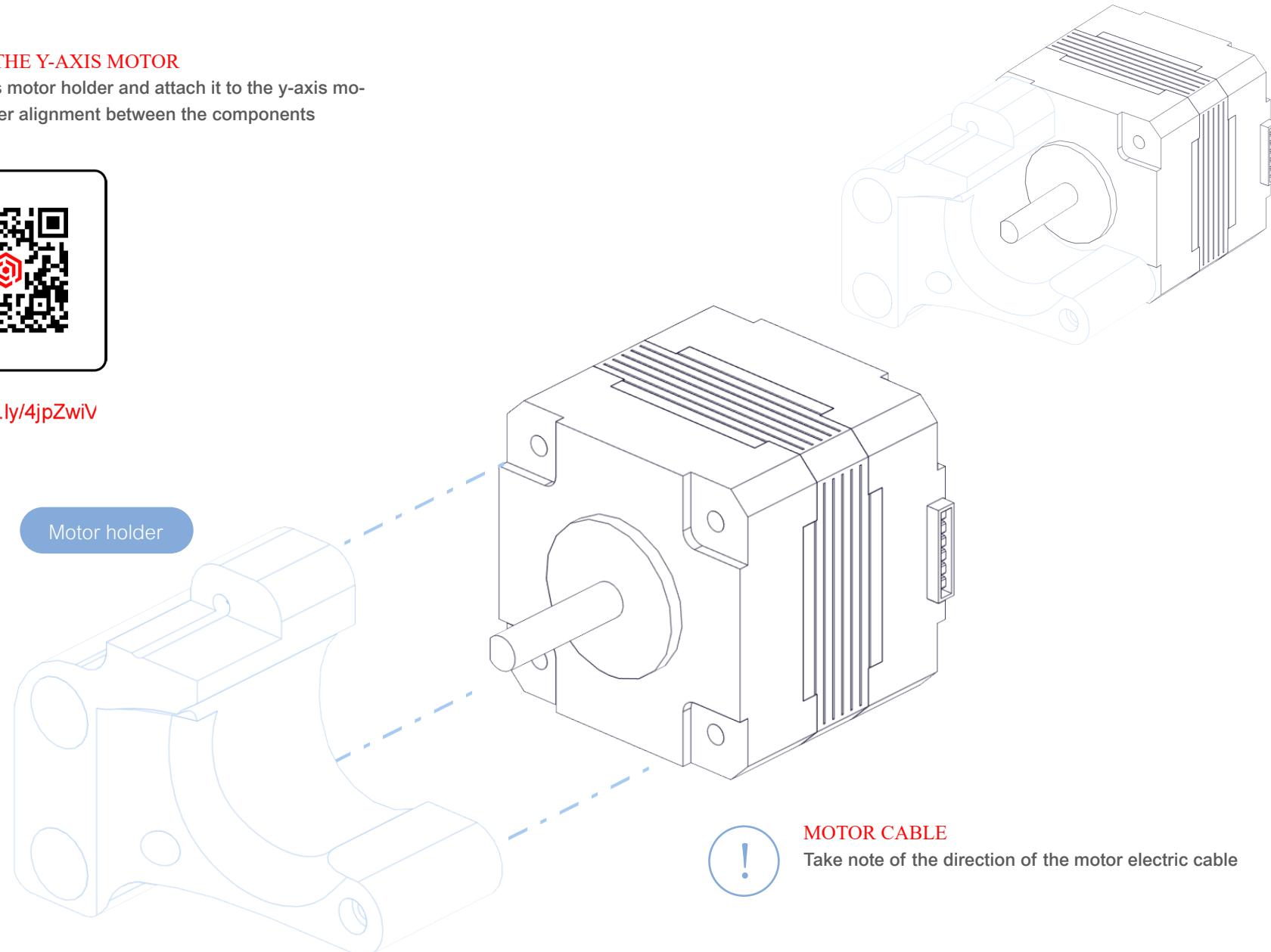


PREPARING THE Y-AXIS MOTOR

Take the y-axis motor holder and attach it to the y-axis motor, make proper alignment between the components

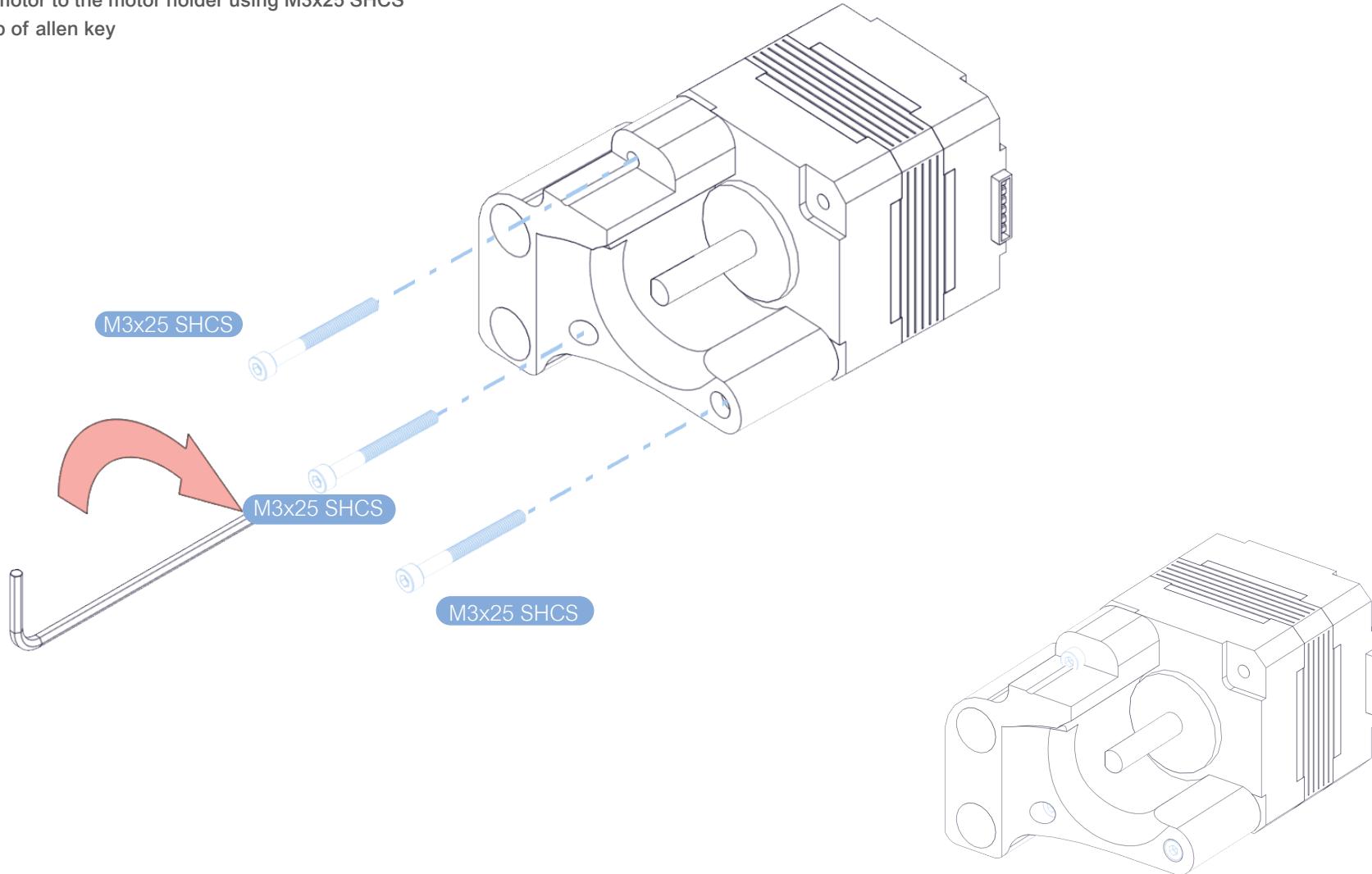


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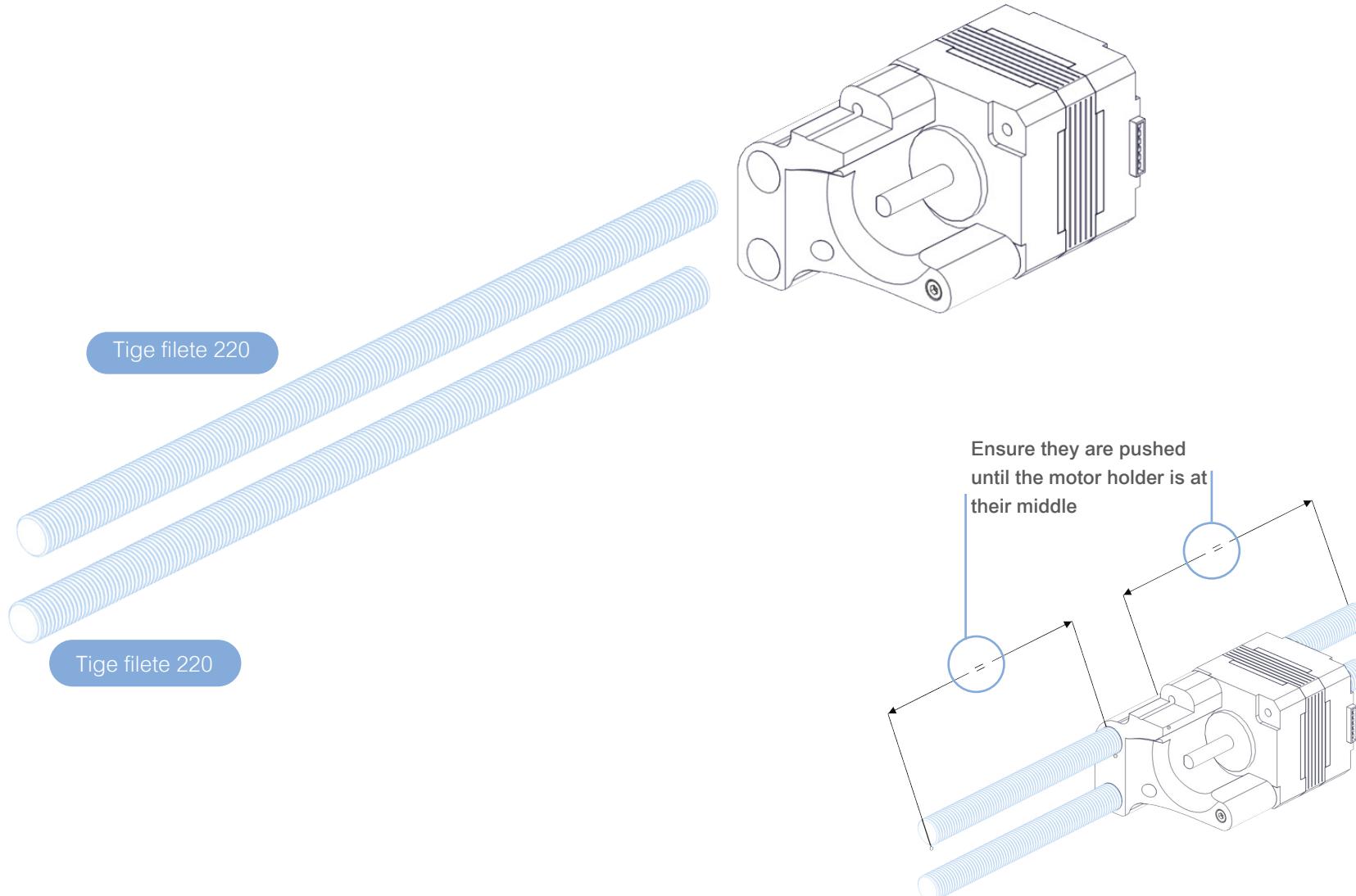
PREPARING THE Y-AXIS MOTOR

Secure the motor to the motor holder using M3x25 SHCS
with the help of allen key



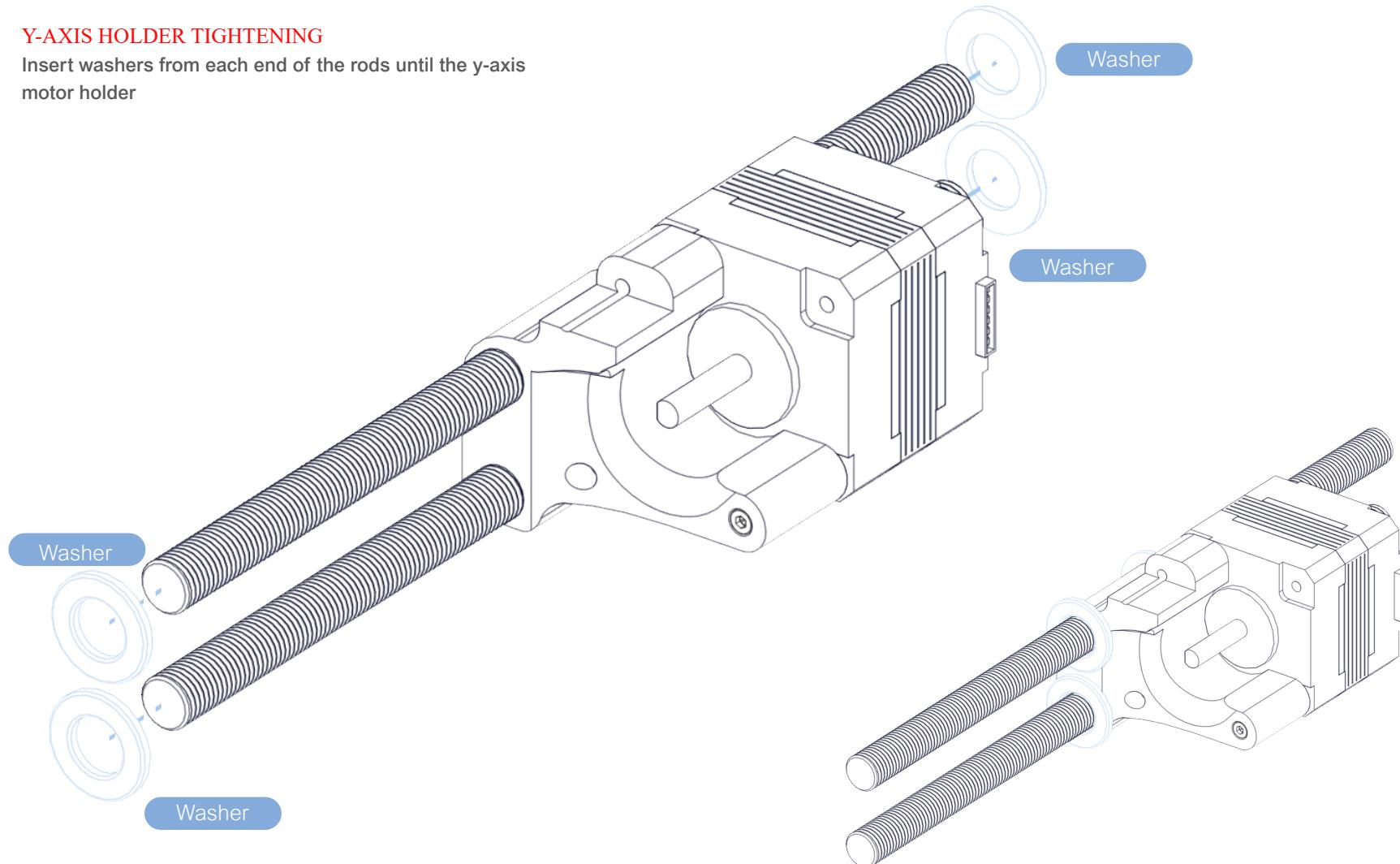
PREPARING THE Y-AXIS MOTOR

Insert the remaining two threaded rods (tige_filete 220)
through the y_motor holder holes



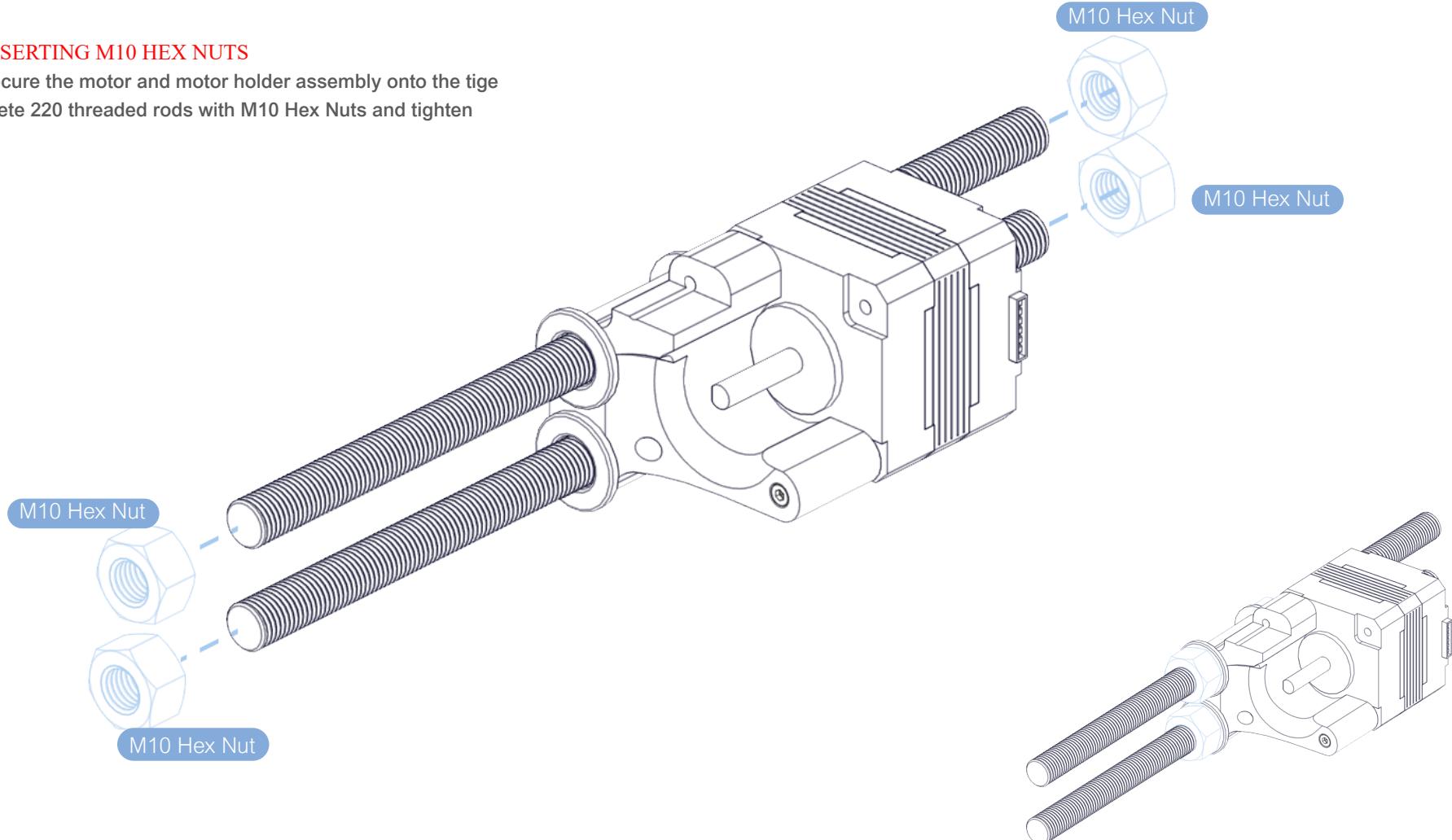
Y-AXIS HOLDER TIGHTENING

Insert washers from each end of the rods until the y-axis motor holder



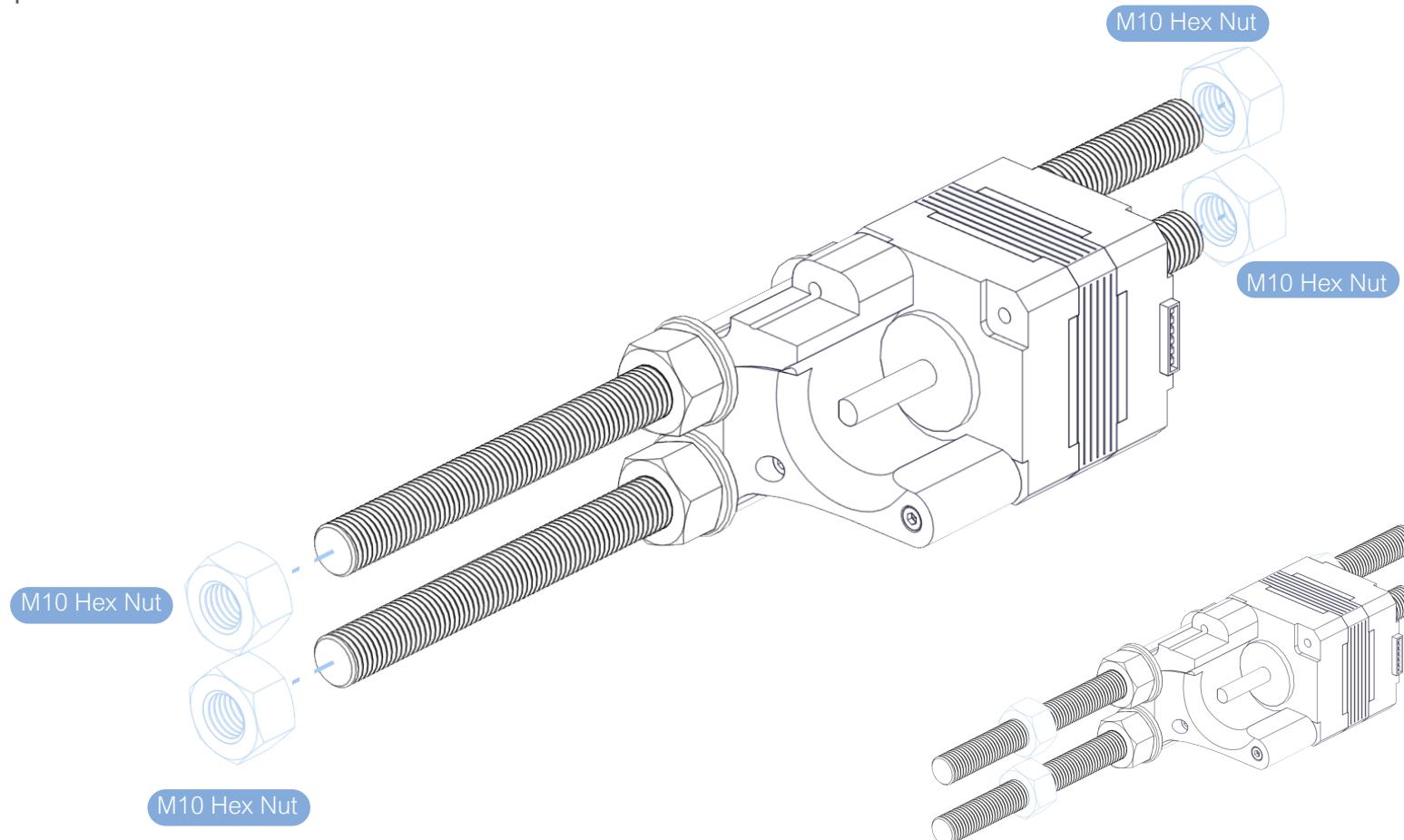
INSERTING M10 HEX NUTS

Secure the motor and motor holder assembly onto the tie
fillets 220 threaded rods with M10 Hex Nuts and tighten



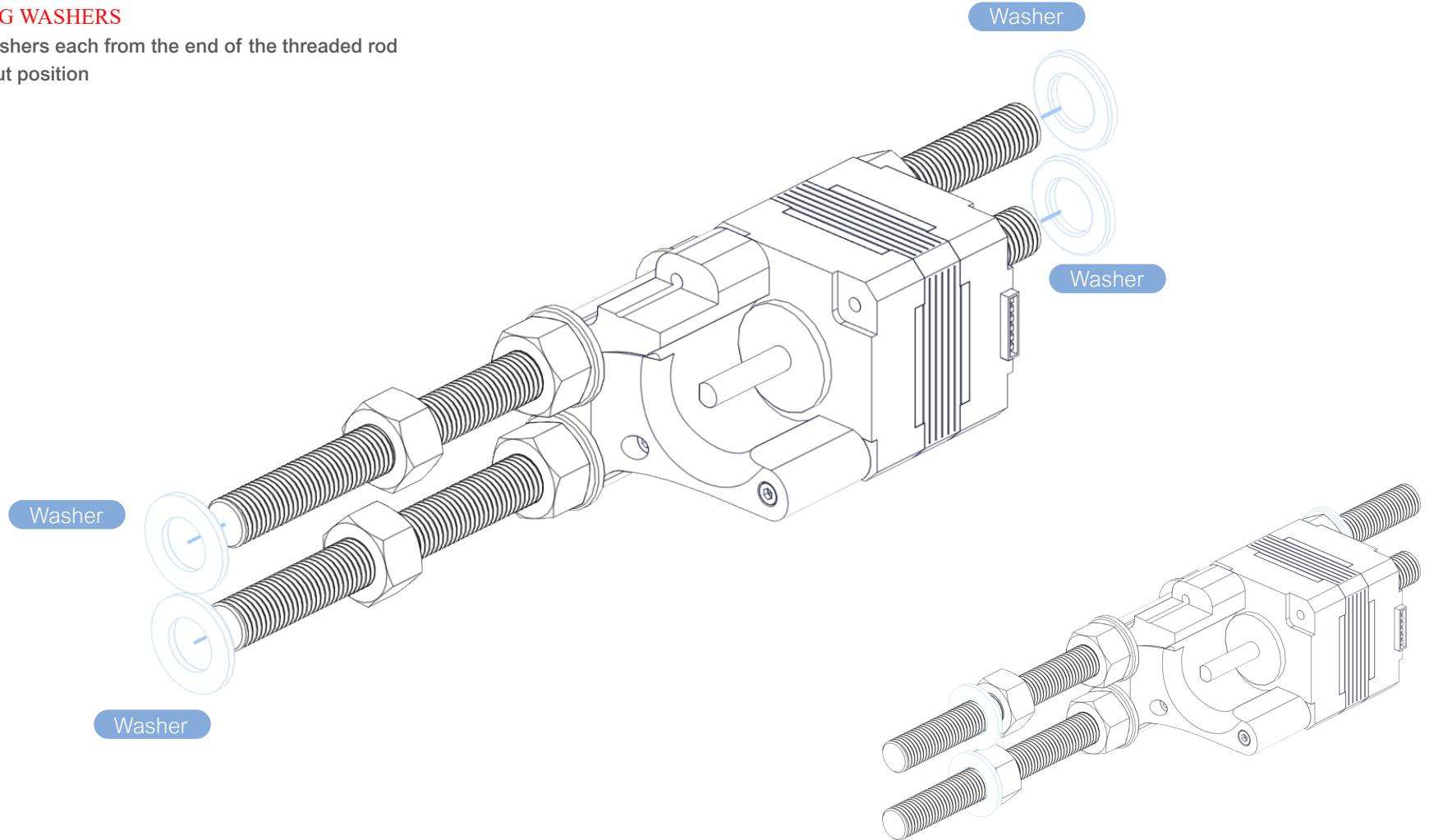
INSERTING M10 HEX NUTS

Insert 4 M10 Hex Nuts two from both ends of each tige filete 220 at equal distances from the ends of the rods



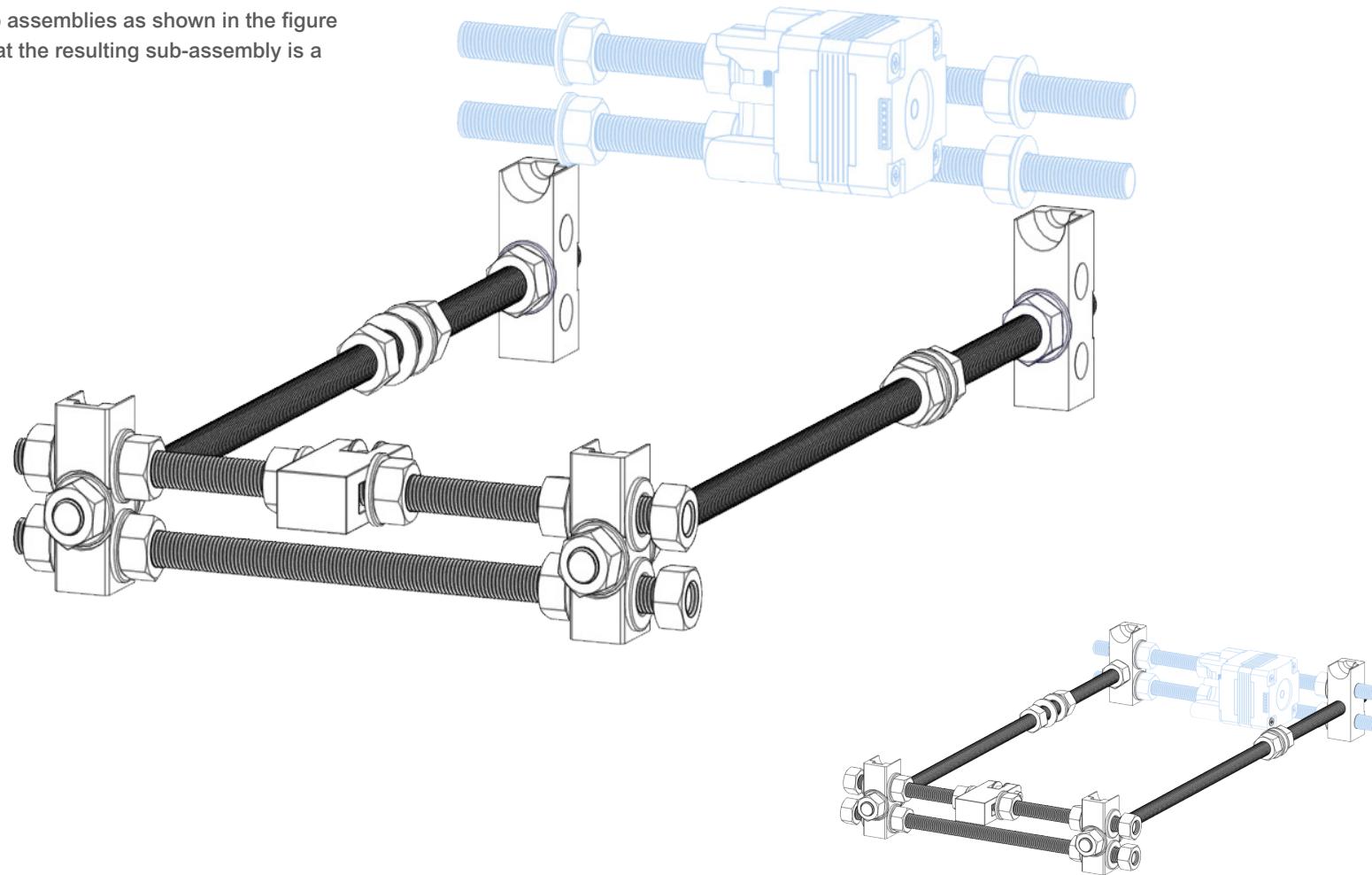
INSERTING WASHERS

Insert 4 washers each from the end of the threaded rod
until the nut position



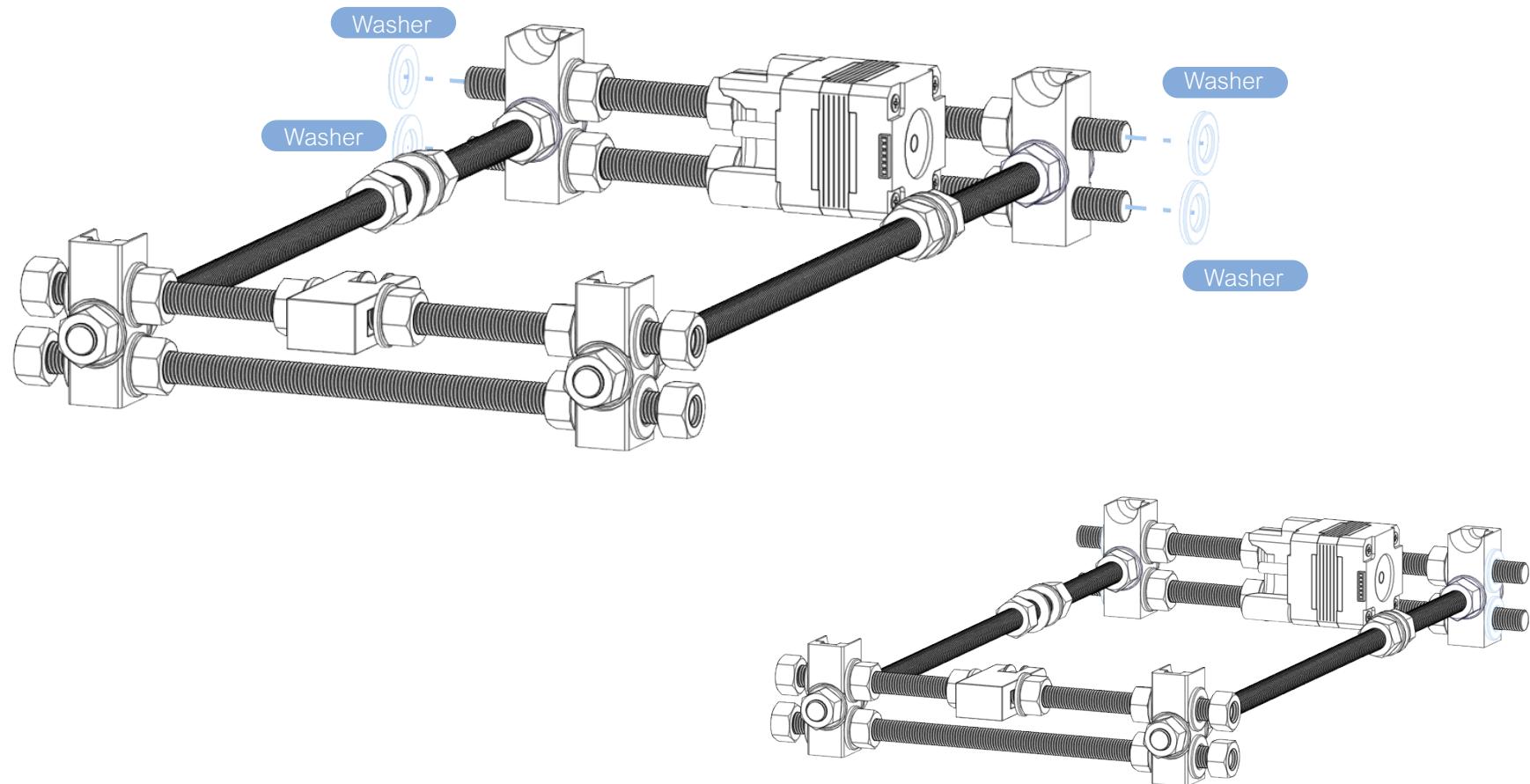
MERGING THE SUB-ASSEMBLIES

Join the both sub assemblies as shown in the figure below. Ensure that the resulting sub-assembly is a perfect rectangle.



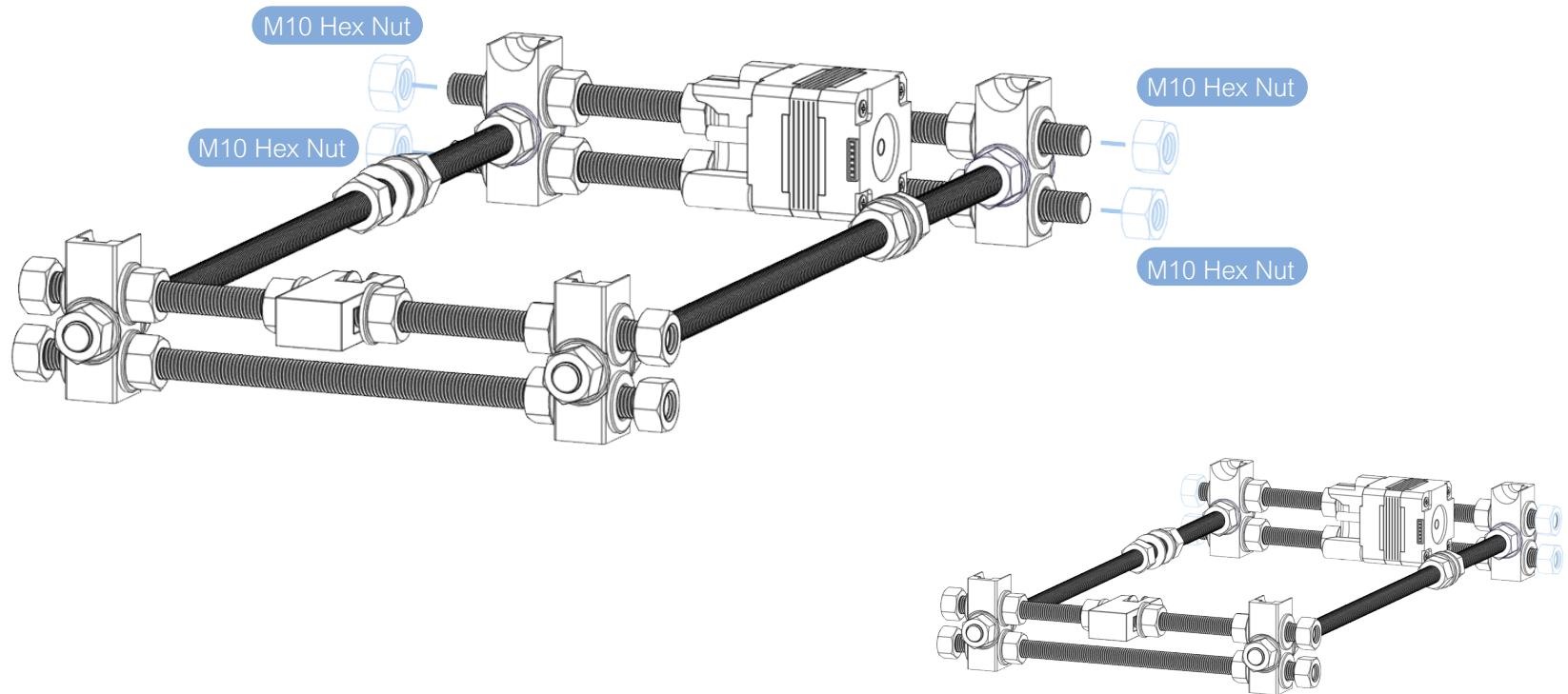
INSERTING WASHERS

Insert 4 washers each from the end of the threaded rod
until the y-axis holder surfaces



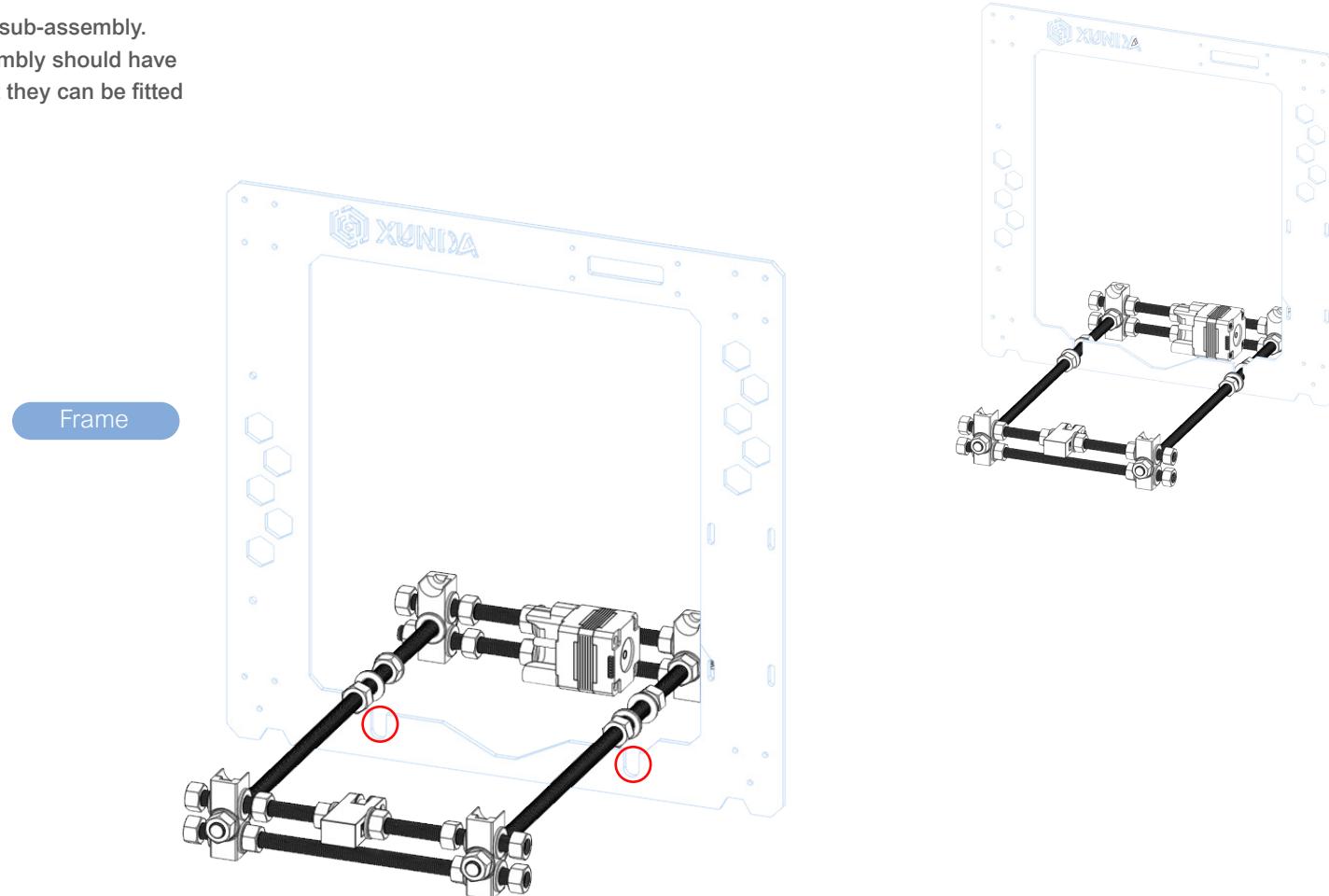
INSERTING M10 HEX NUTS

Insert 4 M10 Hex Nuts two from both ends of each tige
filete 220 until the washer position



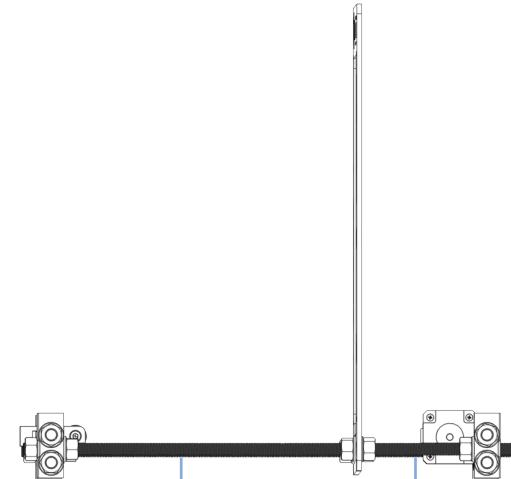
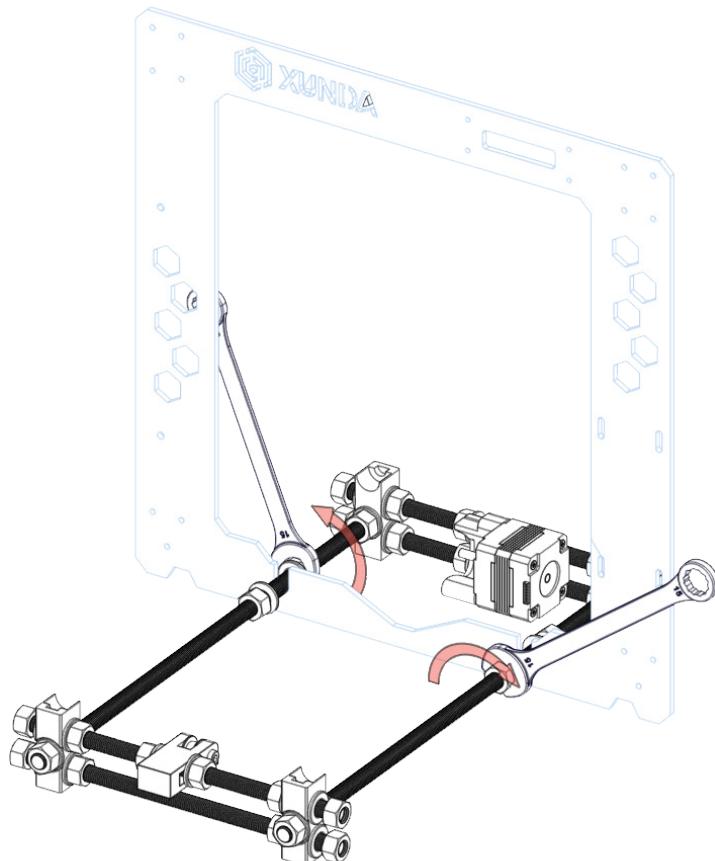
ATTACHING THE FRAME

Attach the frame on to the created sub-assembly.
The threaded rods for the subassembly should have
a distance between them such that they can be fitted
into the open holes of the frame



ATTACHING THE FRAME

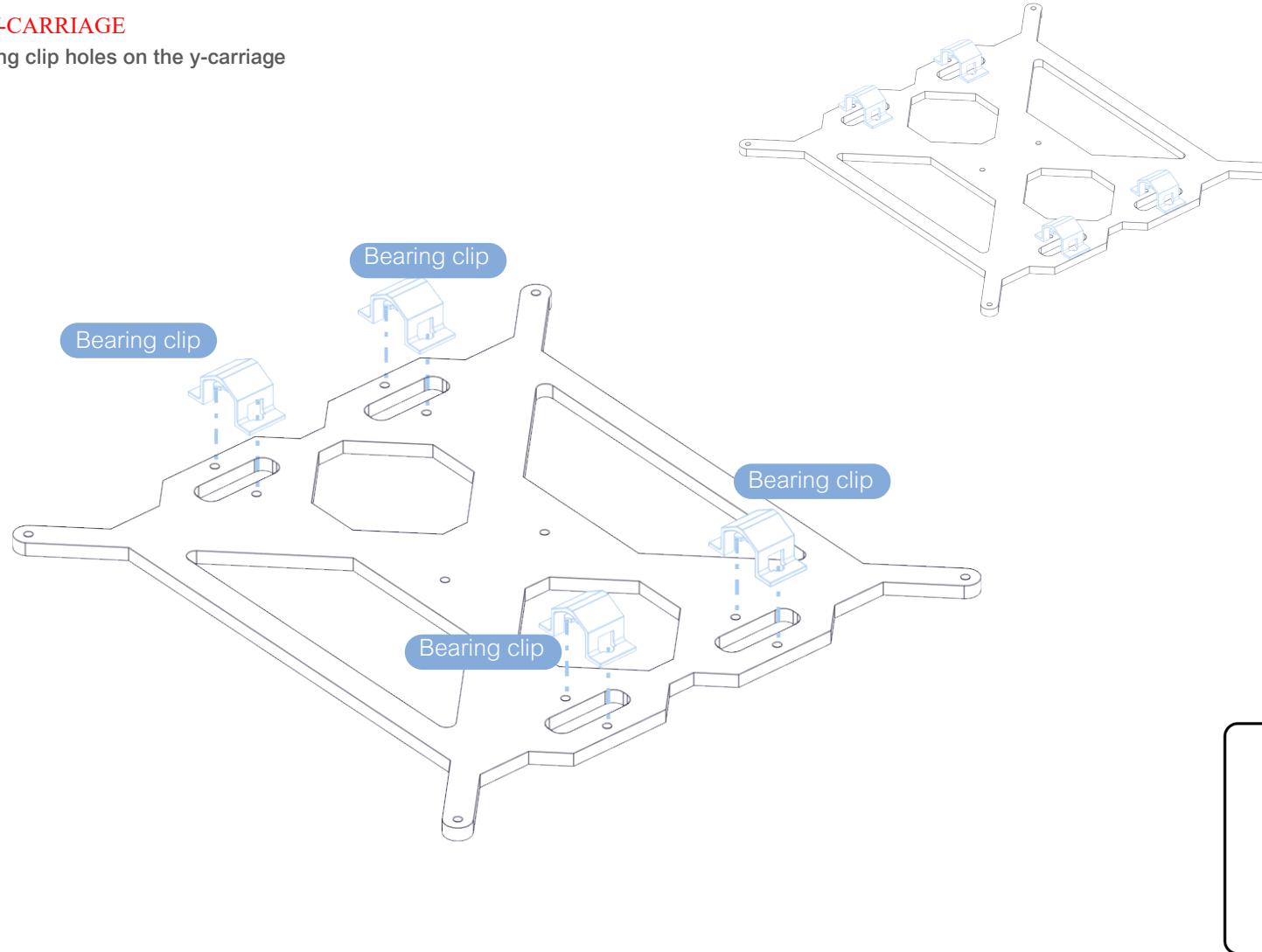
Secure the frame onto the threaded rods-y-axis holder sub-assembly using M10 Hex nuts with wrenches



Ensure that the frame is attached at uneven lengths of the theraded rods, with the front length longer than the behind length

PREPARING THE Y-CARRIAGE

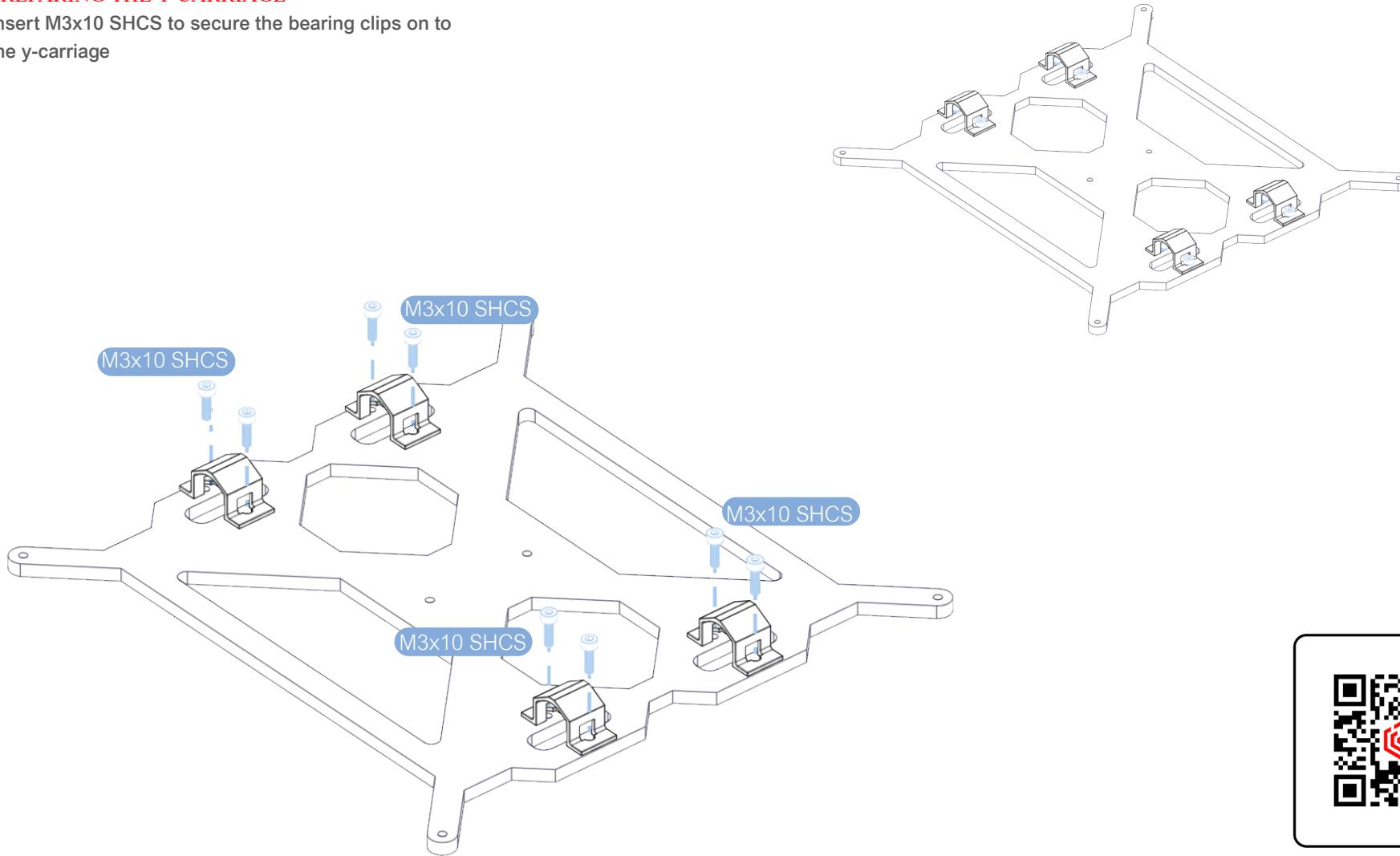
Spot the linear bearing clip holes on the y-carriage
and align the clips



<https://bit.ly/4iX5WGe>

PREPARING THE Y-CARRIAGE

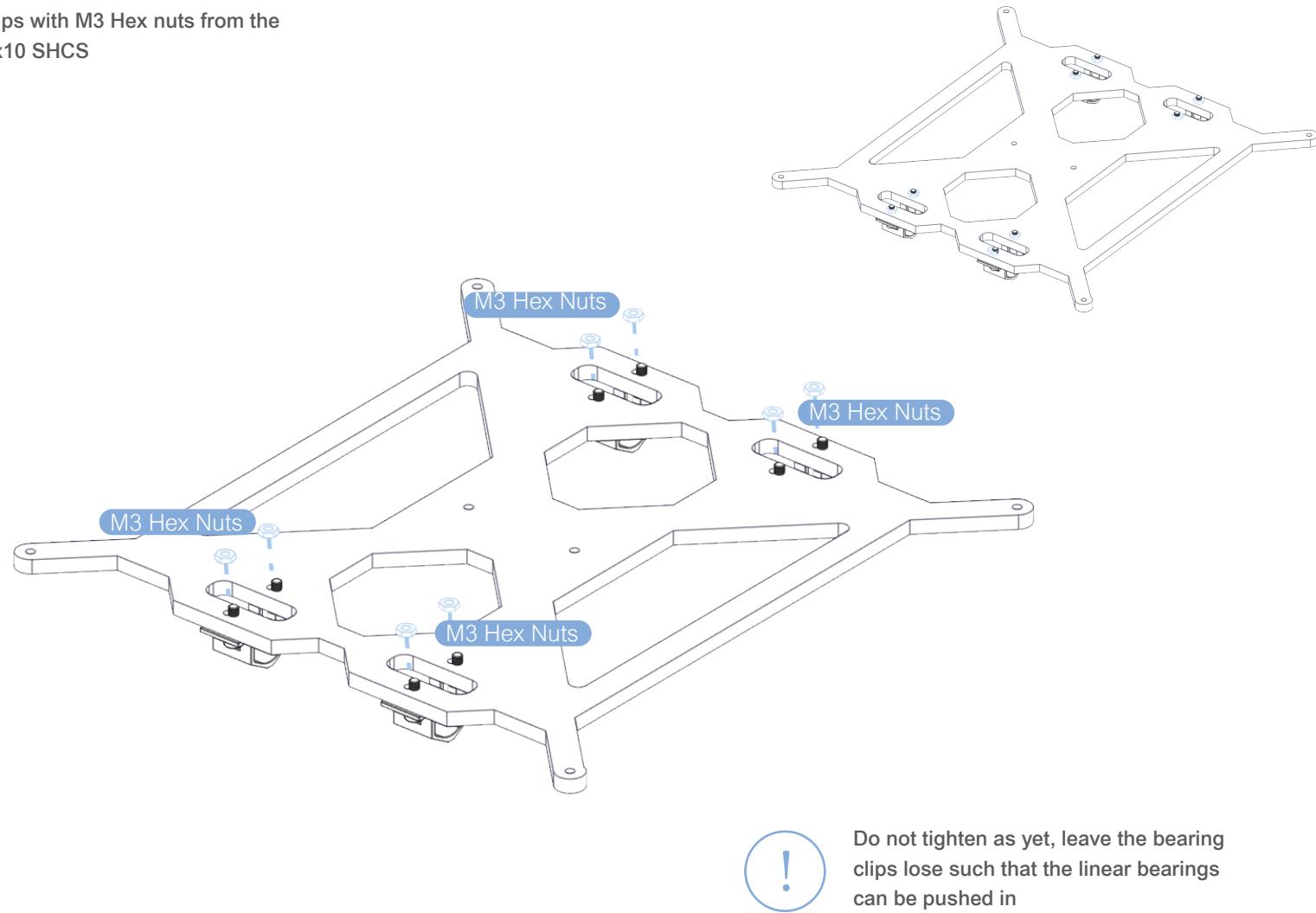
Insert M3x10 SHCS to secure the bearing clips on to the y-carriage



<https://shorturl.at/N9jeC>

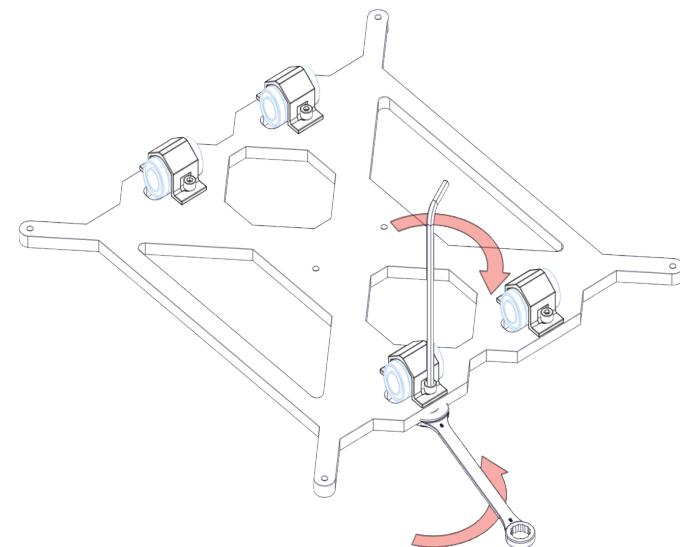
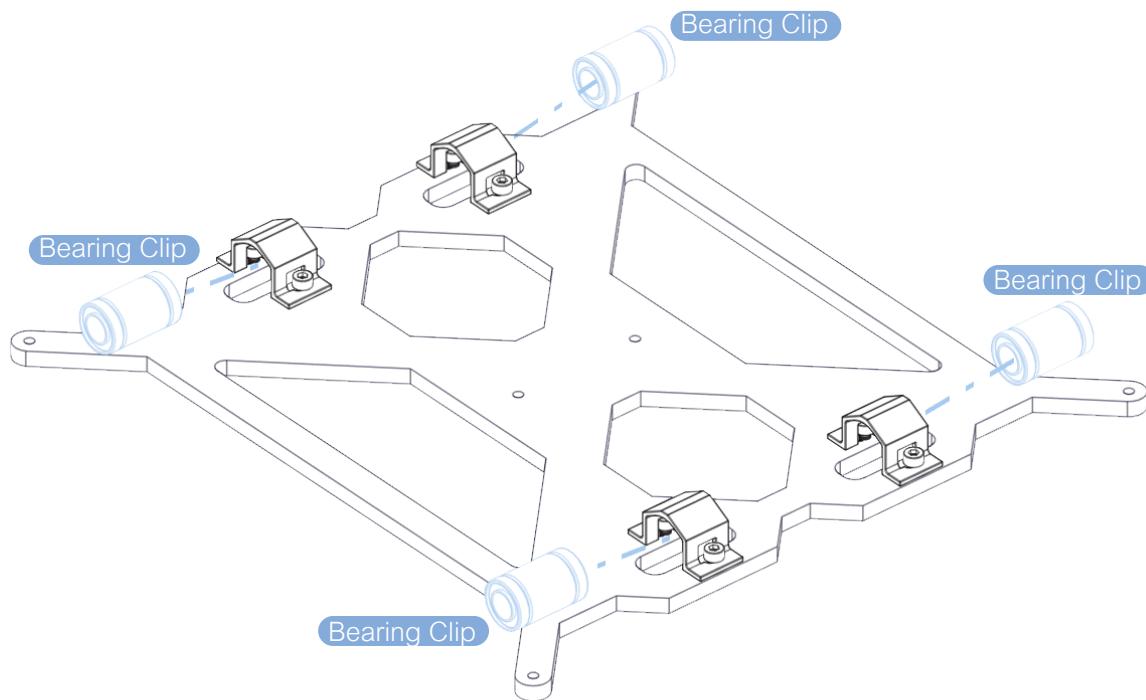
PREPARING THE Y-CARRIAGE

Secure the bearing clips with M3 Hex nuts from the other ends of the M3x10 SHCS

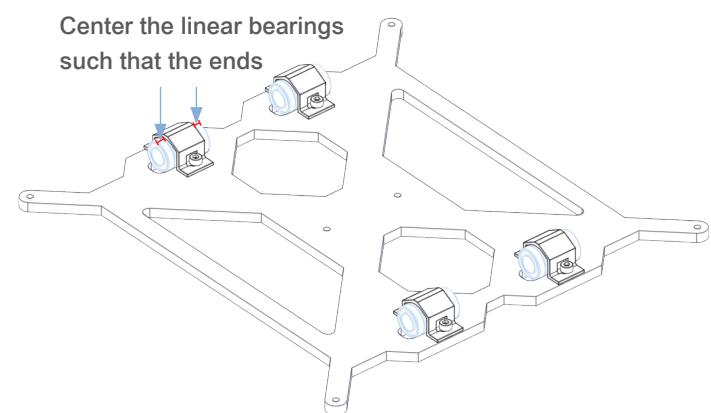


PREPARING THE Y-CARRIAGE

Insert the linear bearings into the bearing clips.
Secure the bearings by tightening the clips with the
M3x10 SHCS and M3 Hex nuts

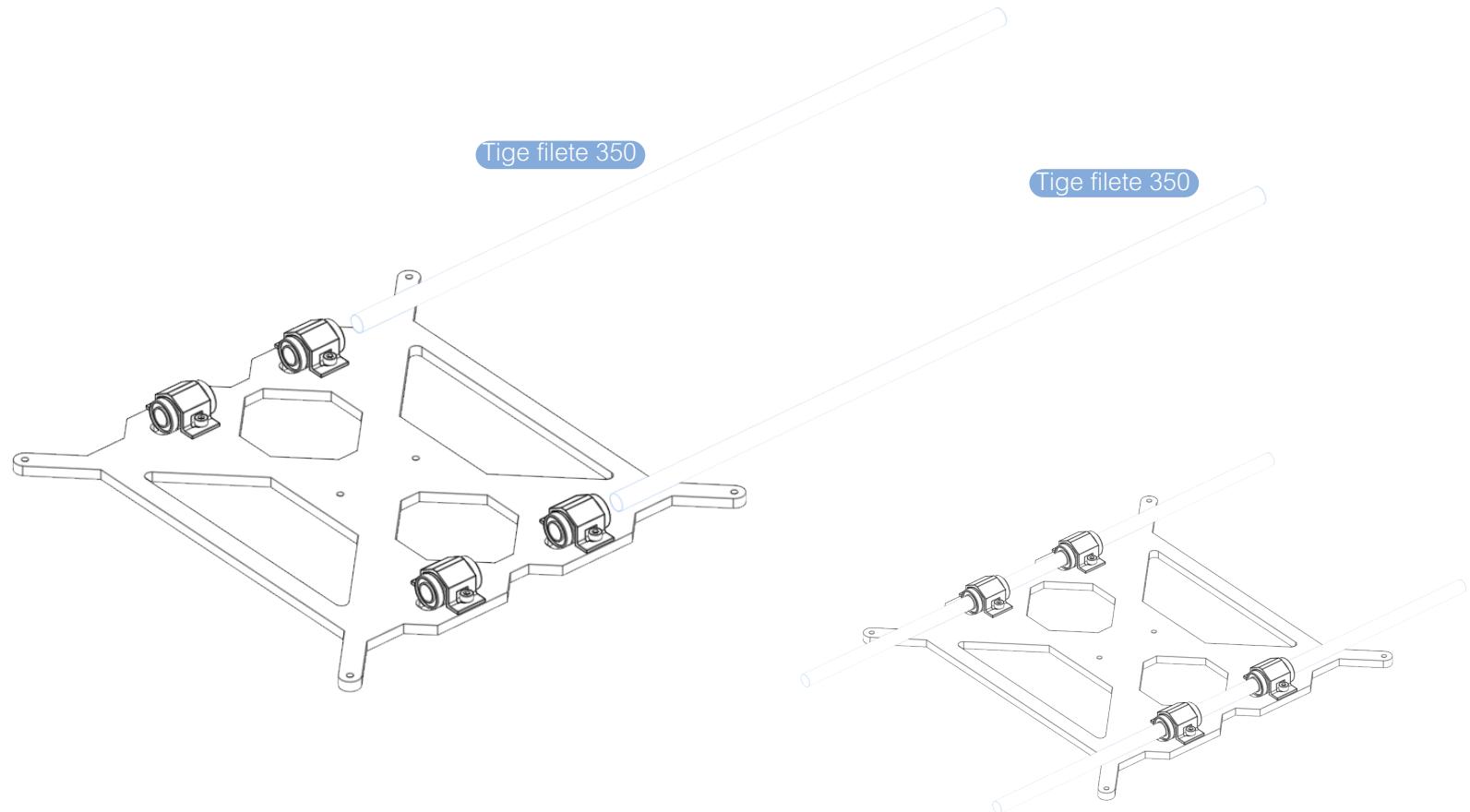


Center the linear bearings
such that the ends



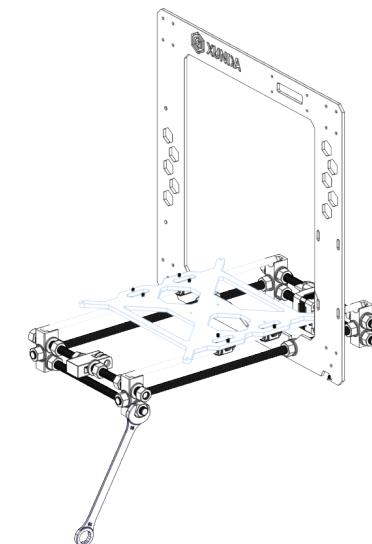
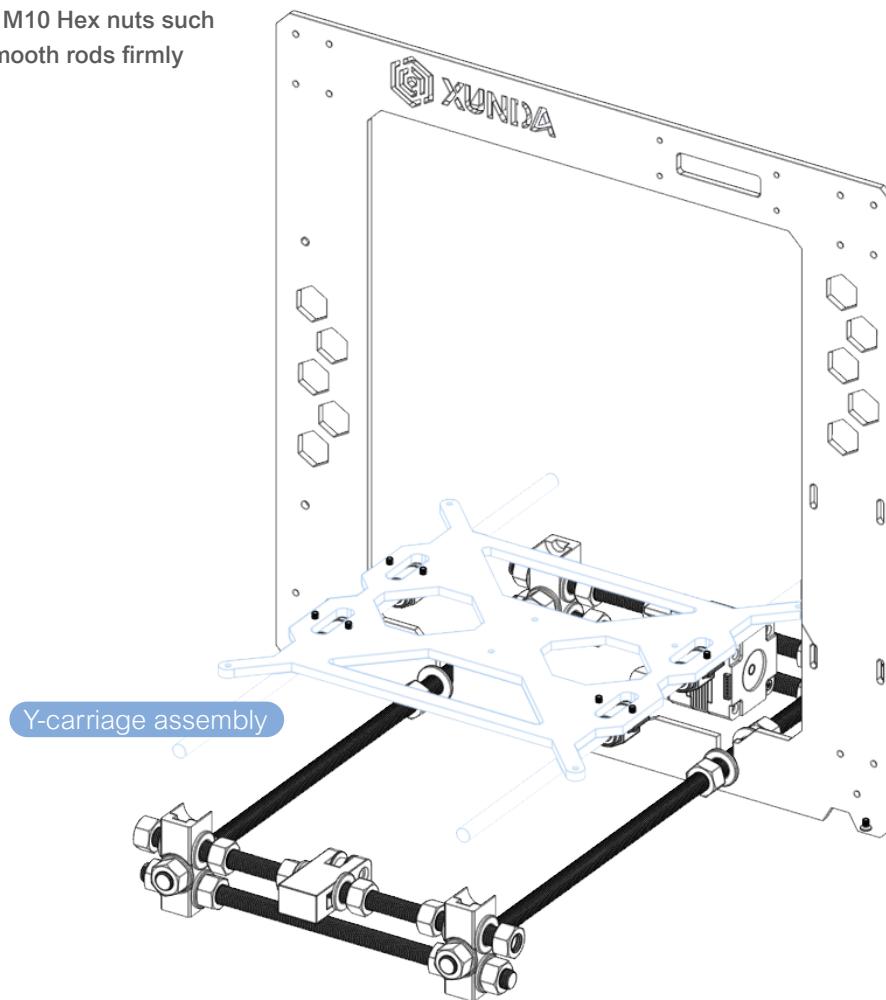
PREPARING THE Y-CARRIAGE

Gently and steadily push two smooth rods (tige filete 350) through the linear bearings attached to the y-carriage



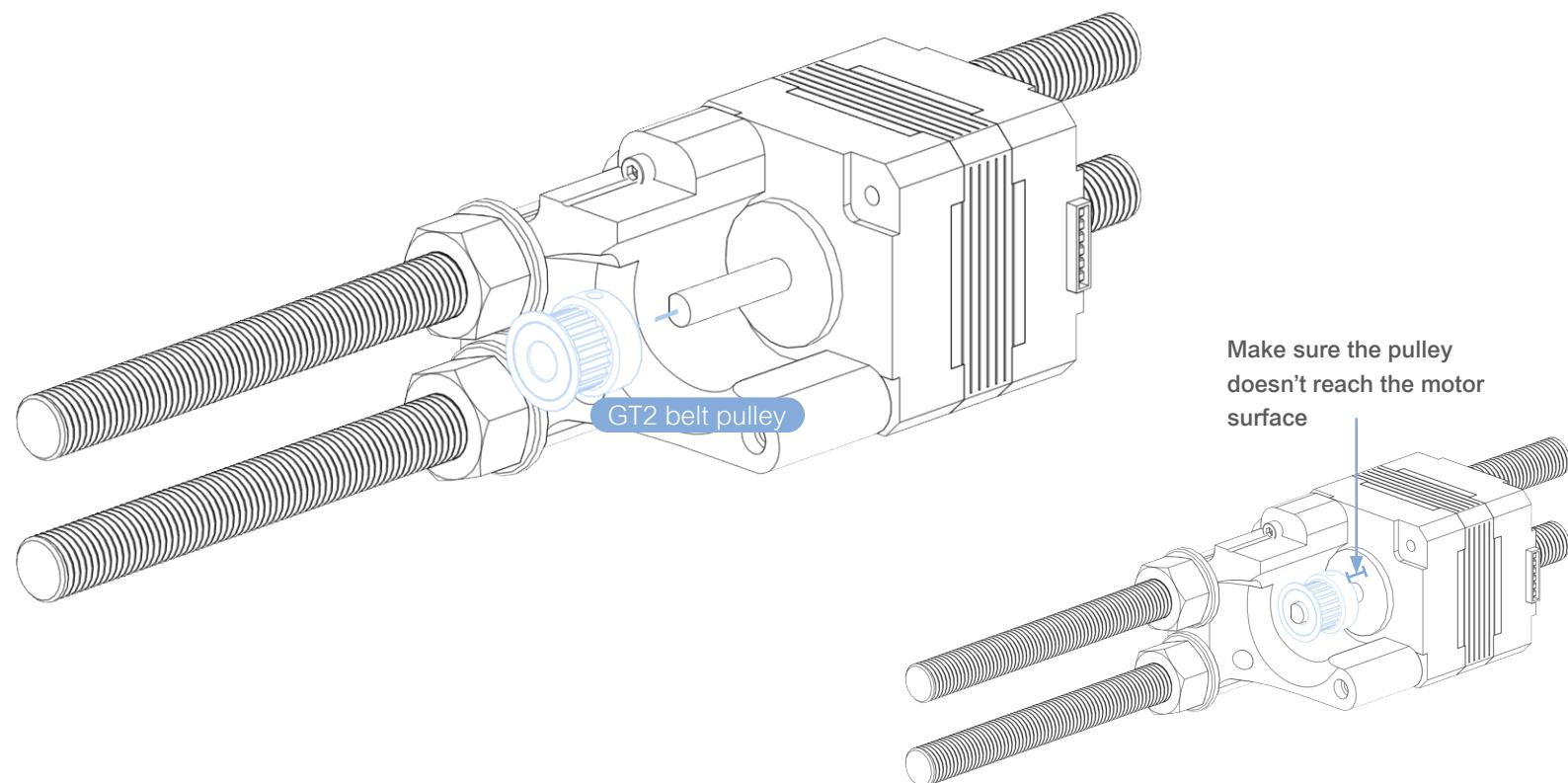
MOUNTING THE Y-CARRIAGE

Mount the y-carriage assembly onto the threaded rods and frame assembly. Ensure the smooth rods (tige filete 350) ends fit into the y-axis holder top oval depression. Tighten the M10 Hex nuts such that y-axis holder hold the smooth rods firmly



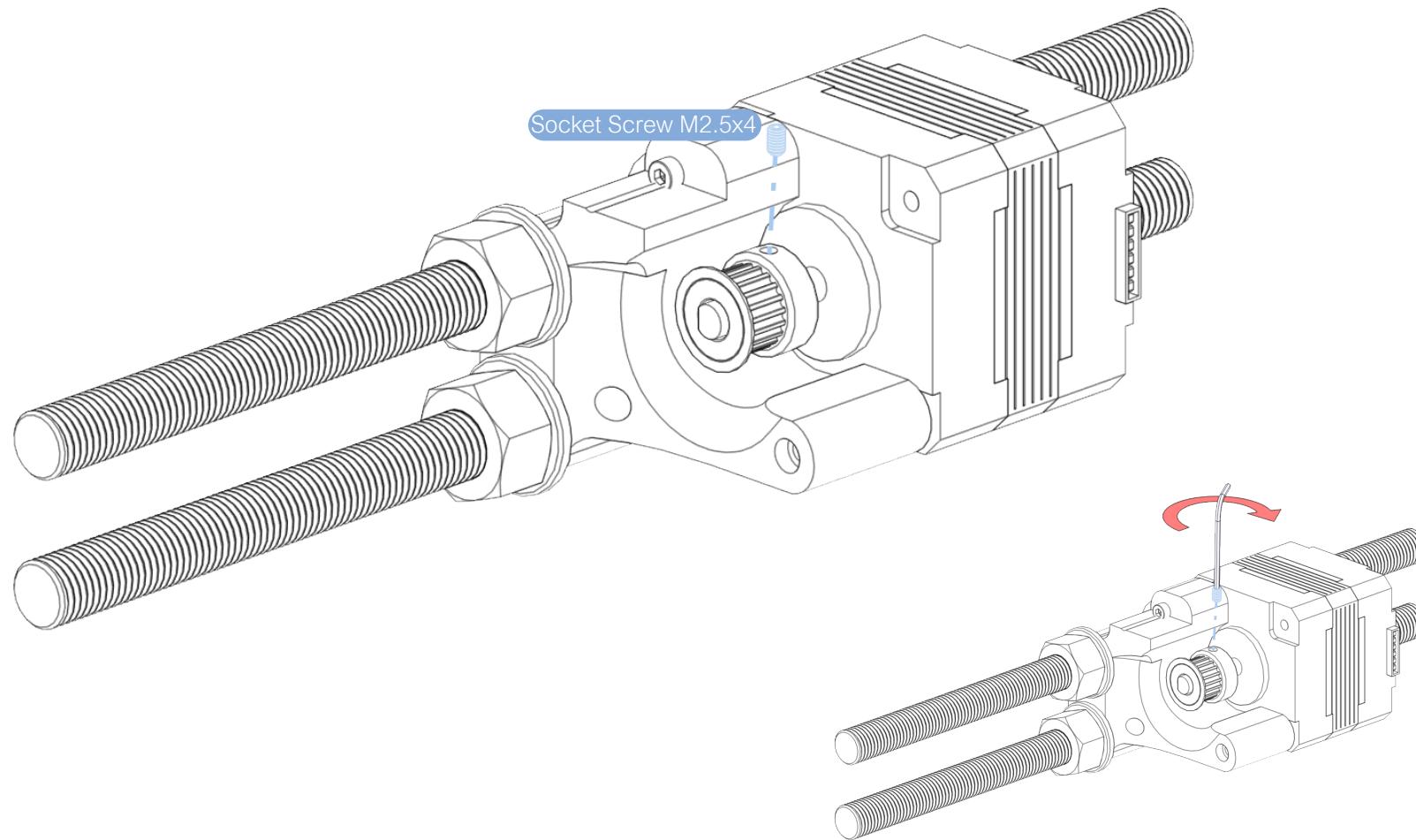
MOUNTING THE BELT PULLEY

Align the GT2 belt pulley with the motor shaft as shown in the figure below. Push the belt pulley on to the motor shaft. The pulley should not touch the motor such that it rotates freely



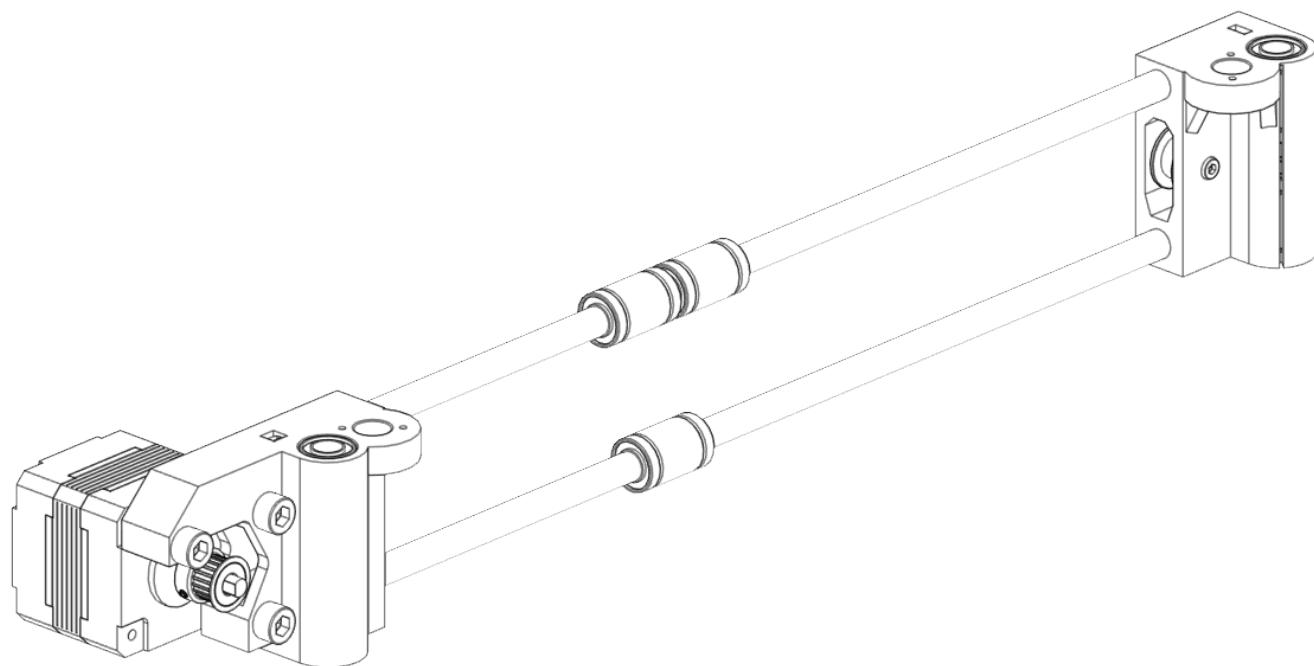
MOUNTING THE BELT PULLEY

Secure the GT2 belt pulley on to the motor shaft with socket set screw M2.5x4 using allen key. Align the belt pulley with the belt bearing and then tighten the pulley.



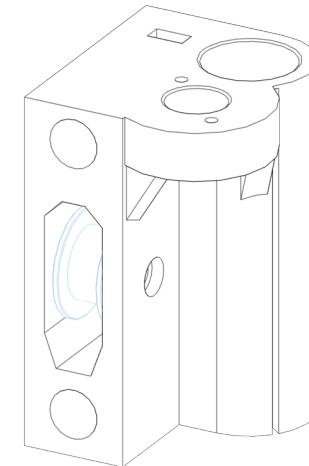
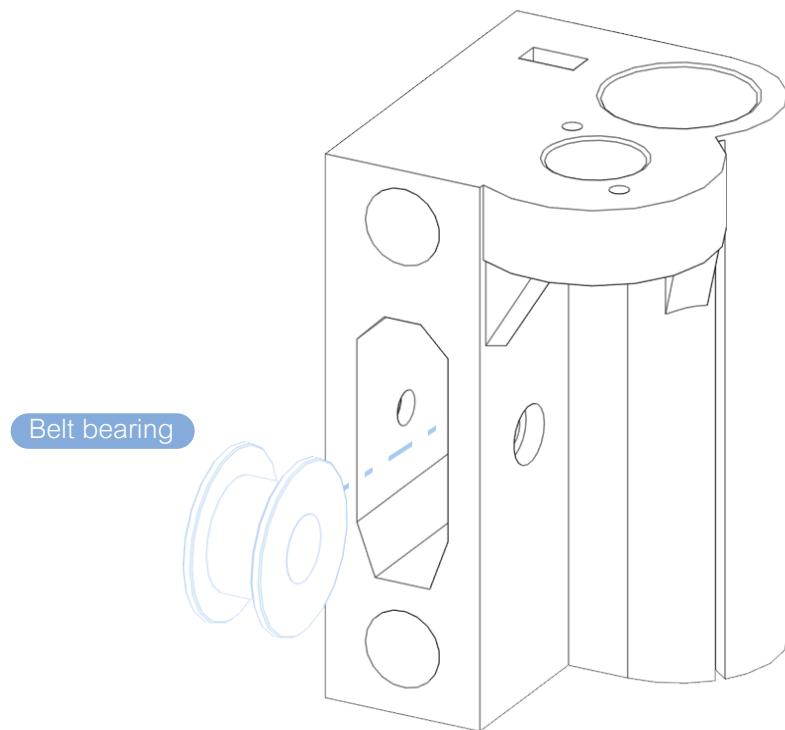
X-AXIS ASSEMBLY

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PREPARING THE X-END IDLER

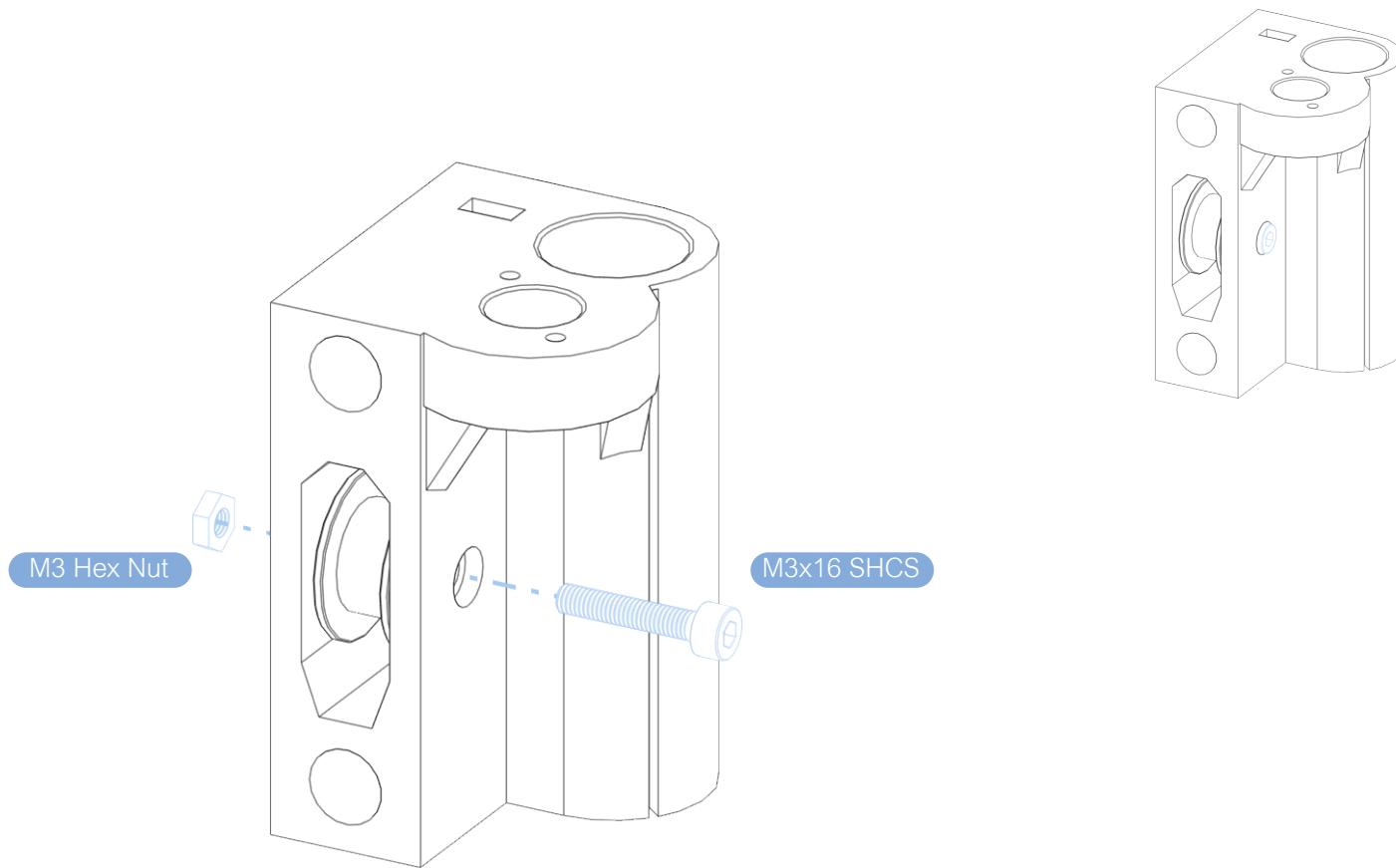
Align the belt bearing with the x-end idler and then push the bearing into x-end pocket as shown in the figures.



<https://shorturl.at/qSImI>

PREPARING THE X-END IDLER

Secure the belt bearing to the x-end idler using M3x16 SHCS and M3 Hex nut with the help of allen key and wrench

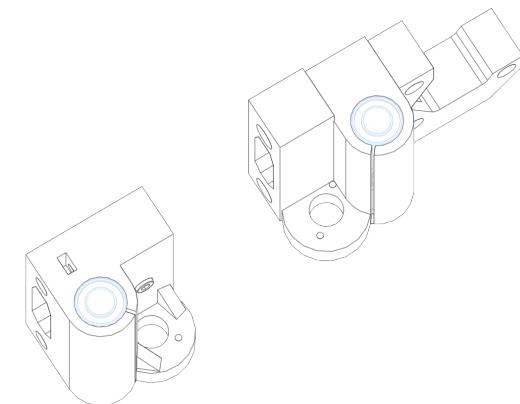
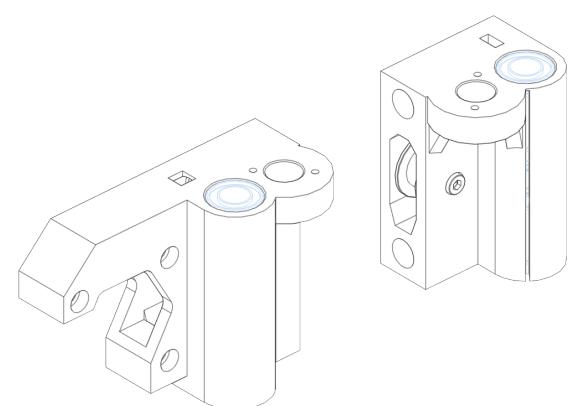
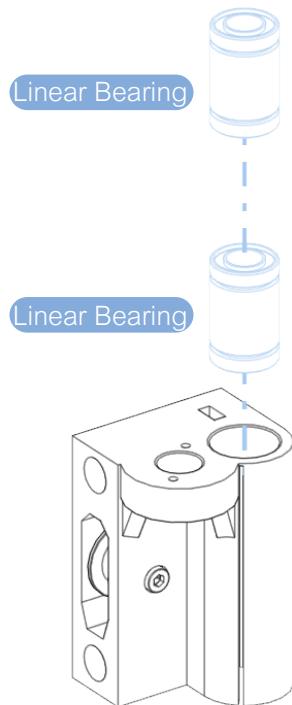
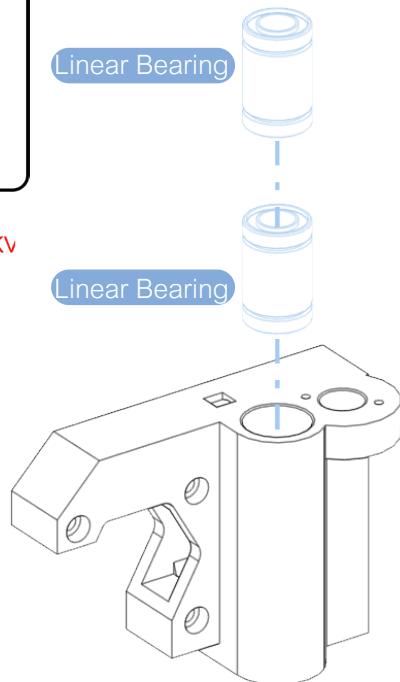


INSERTING LINEAR BEARINGS

Take the x-end motor holder and the x-end idler, insert two linear bearing in each part as shown.

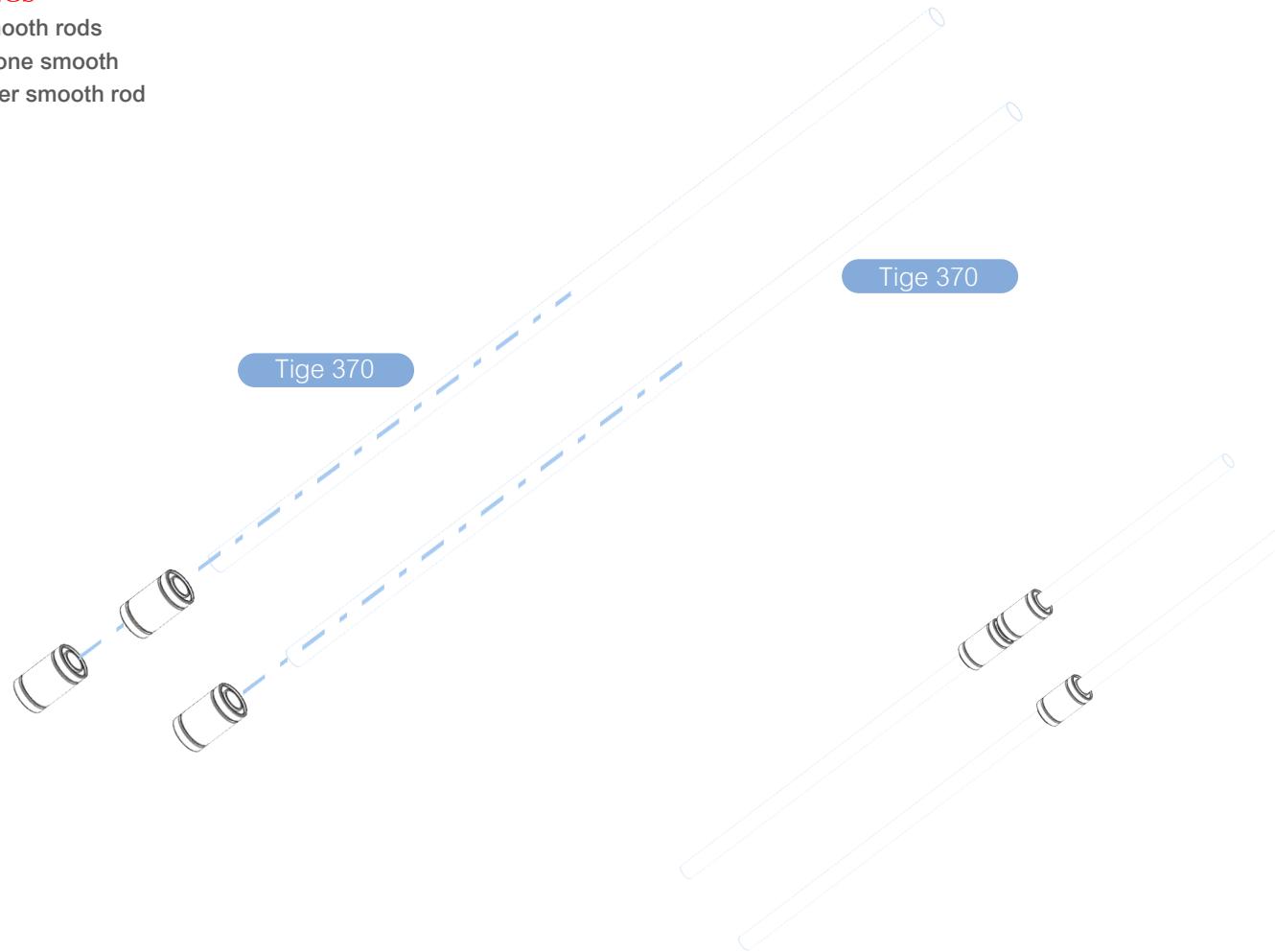


<https://shorturl.at/QAsKv>



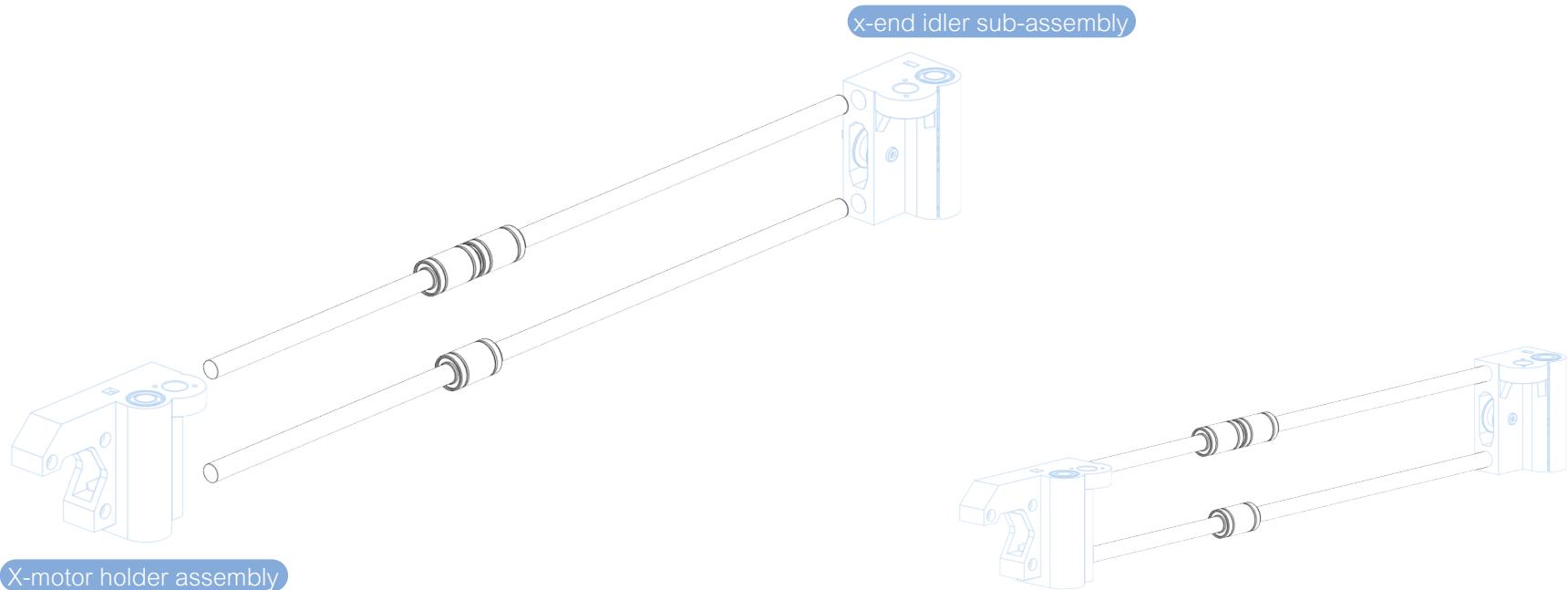
INSERTING LINEAR BEARINGS

Insert 3 linear bearings on 2 smooth rods
(tige 370), 2 linear bearings on one smooth
rod and 1 linear bearing the other smooth rod



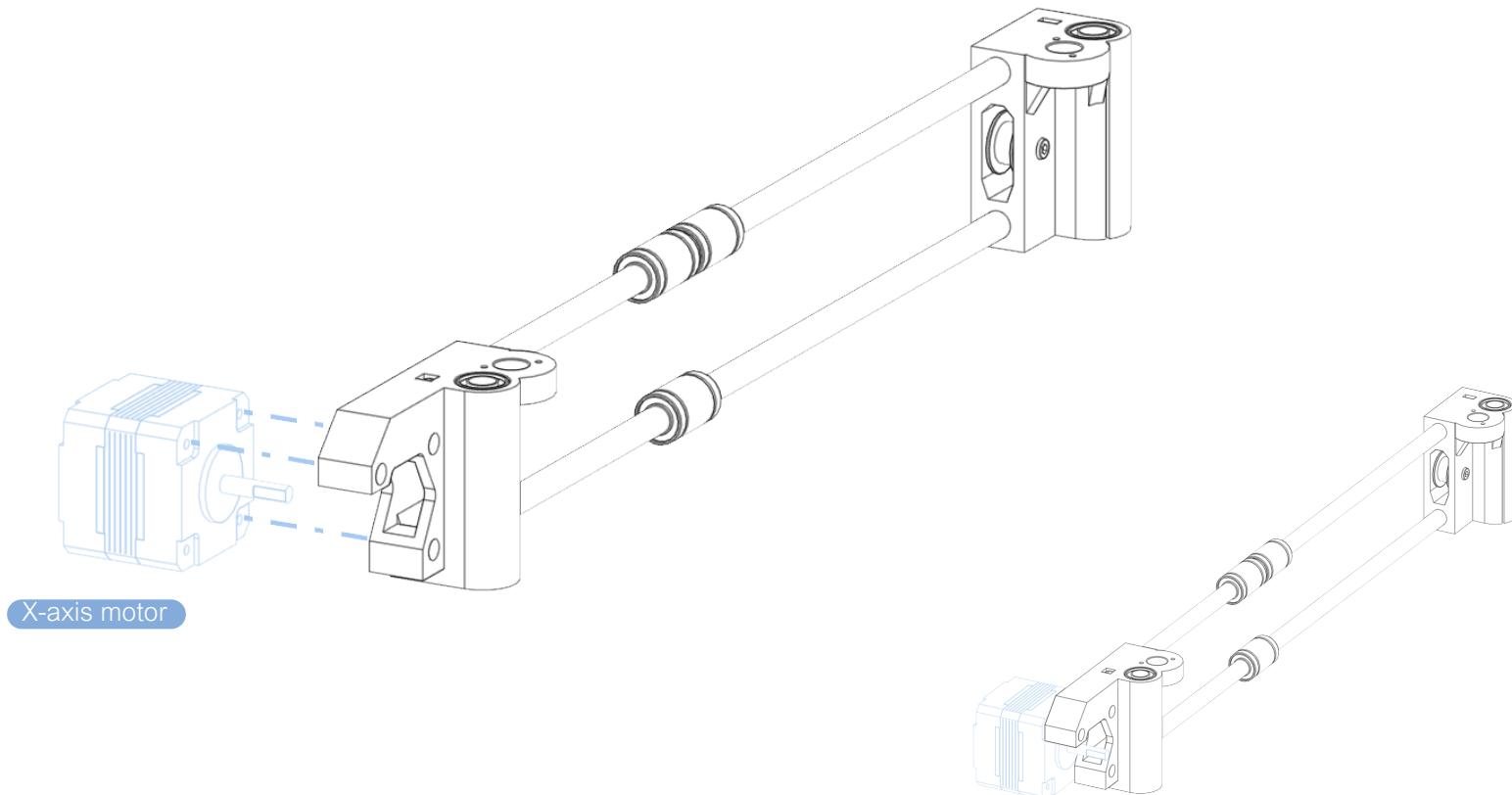
MOUNTING THE SUB-ASSEMBLIES

Insert the smooth rods sub-assemblies into the printed parts sub-assemblies as shown. Take care of the directions of the the printed parts faces.



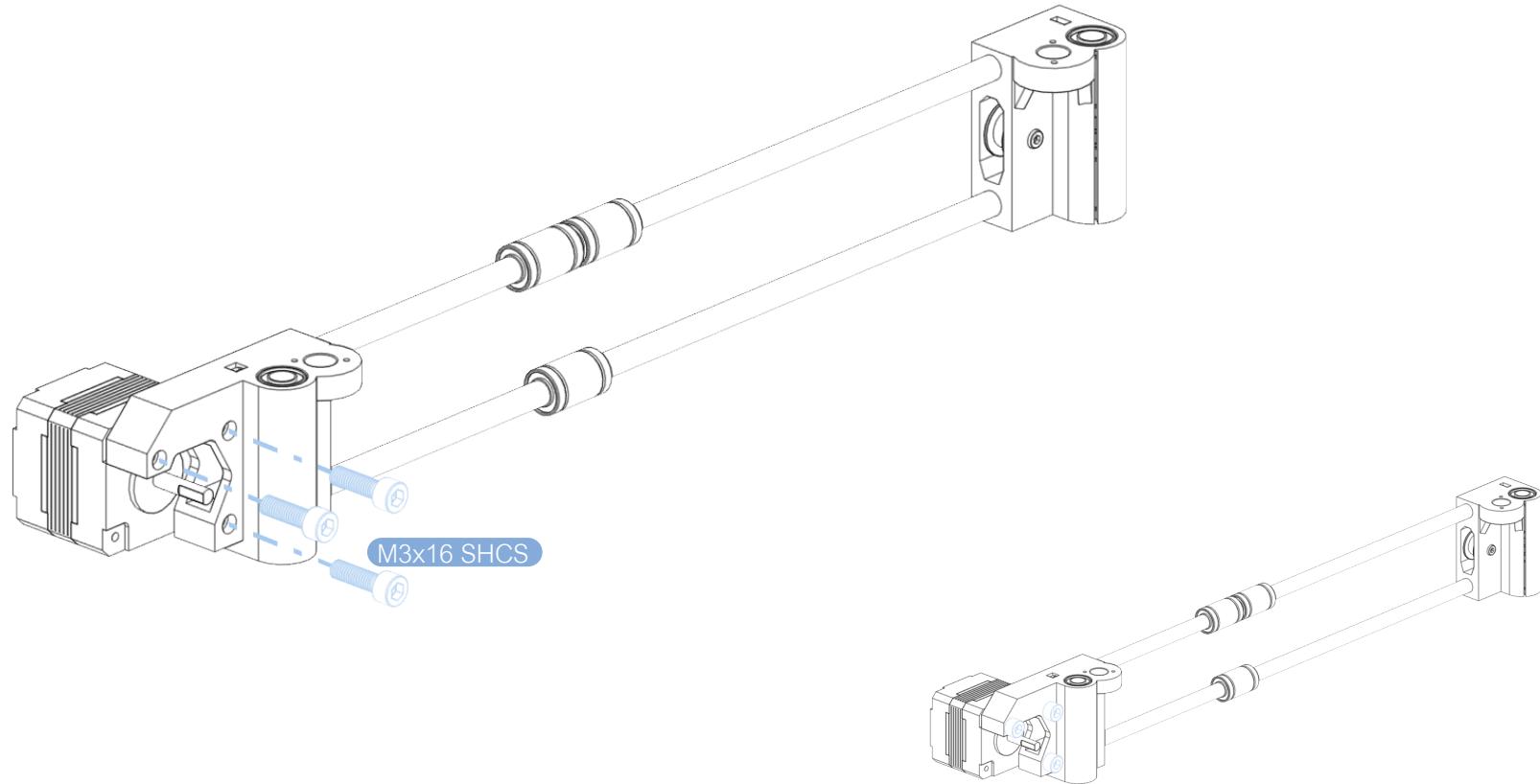
MOUNTING X-AXIS MOTOR

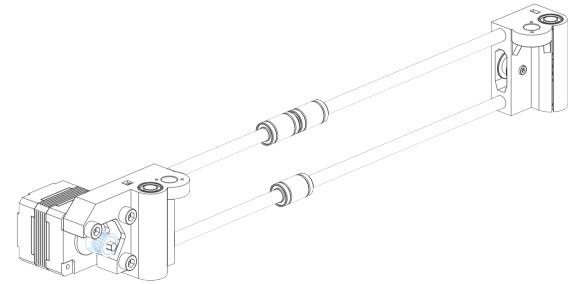
Take the x-axis motor and align its three bolt holes with the back side of the x-motor holder. It is good practice to make the motor cable port face down



MOUNTING X-AXIS MOTOR

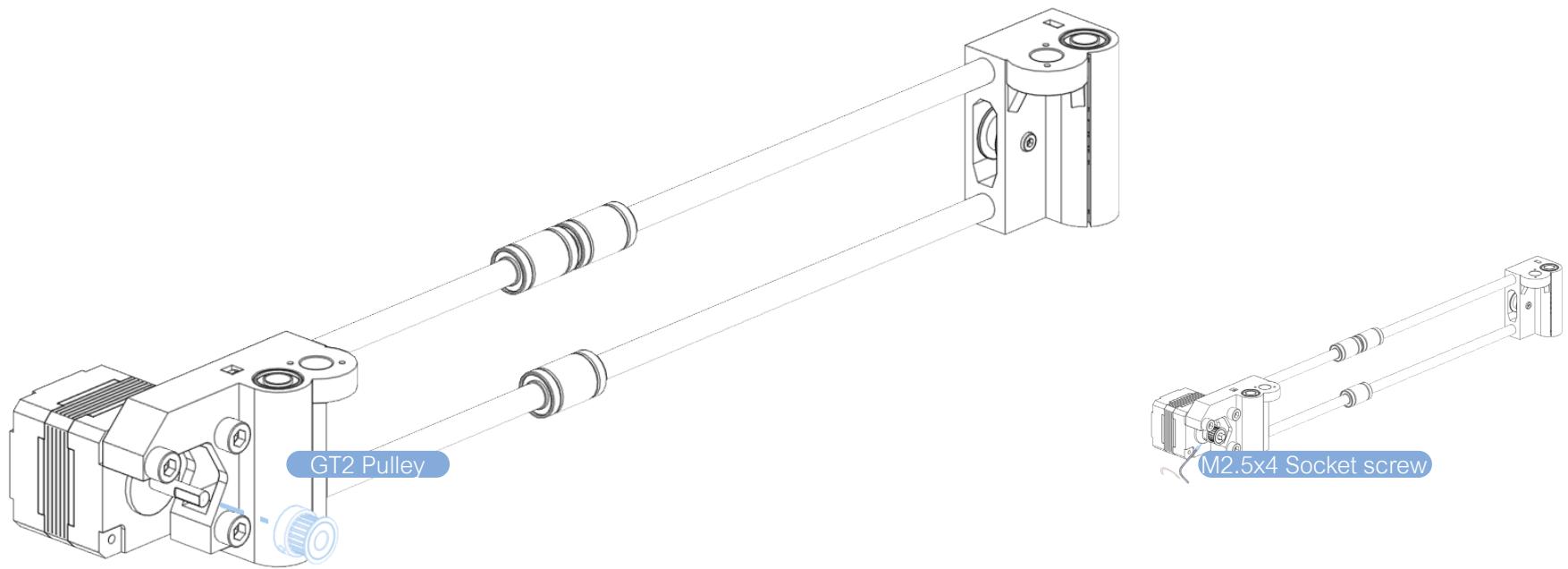
Secure the motor to the x-end motor holder using M3x16 SHCS with the help of allen keys





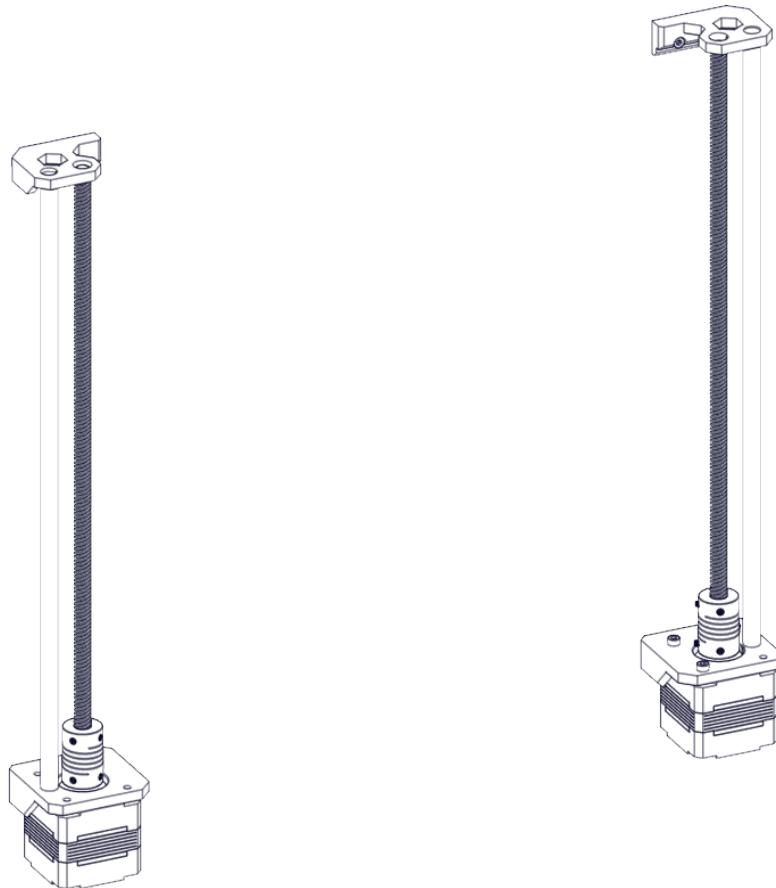
MOUNTING BELT PULLEY

Take the GT2 pulley and align it with the motor shaft as shown. Push the pulley on to the shaft, align it with the belt bearing in x-end idler and secure it with M2.5x4 socket set screw



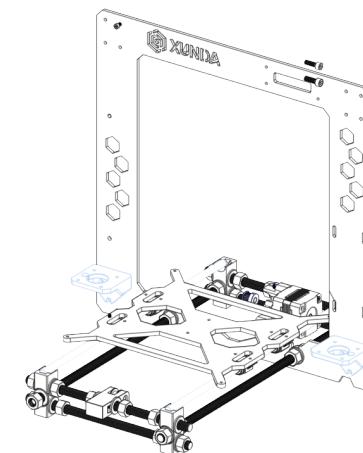
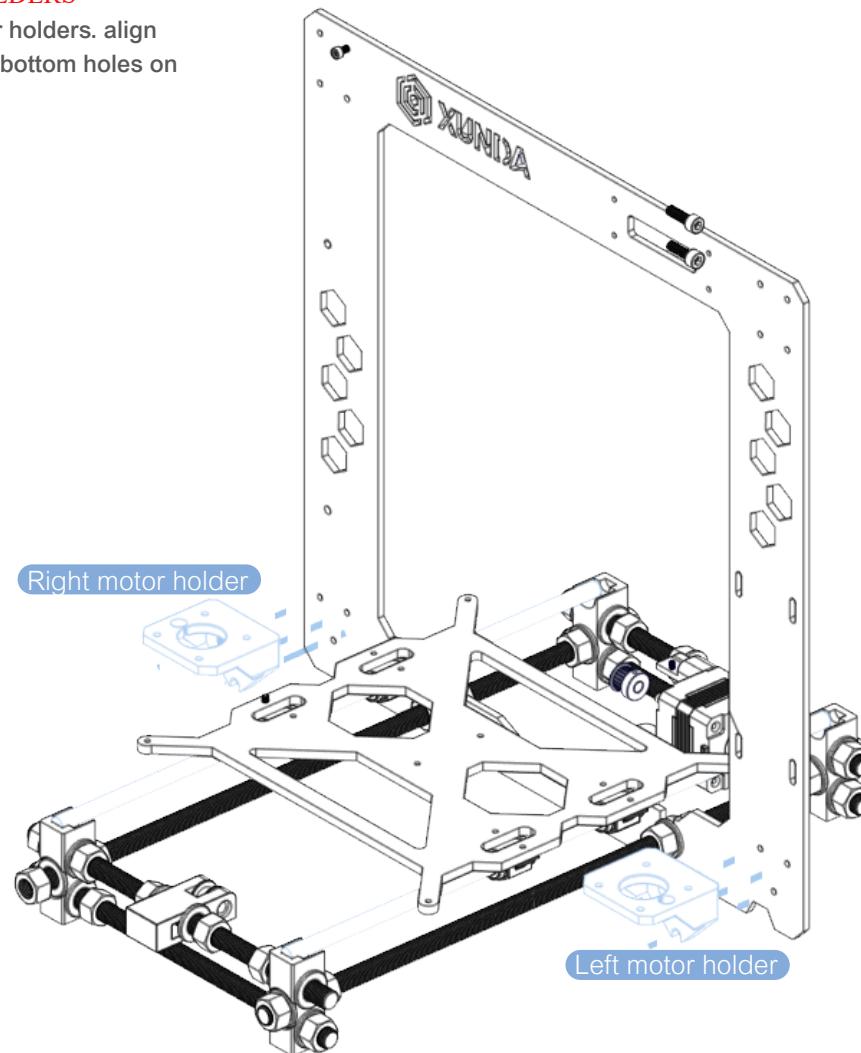
Z-AXIS ASSEMBLY

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MOUNTING Z-MOTOR HOLDERS

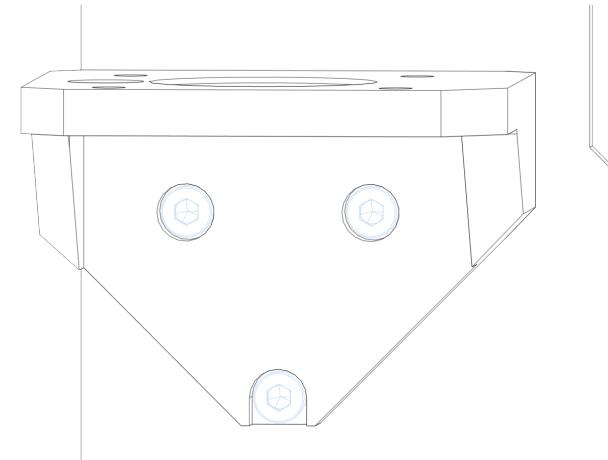
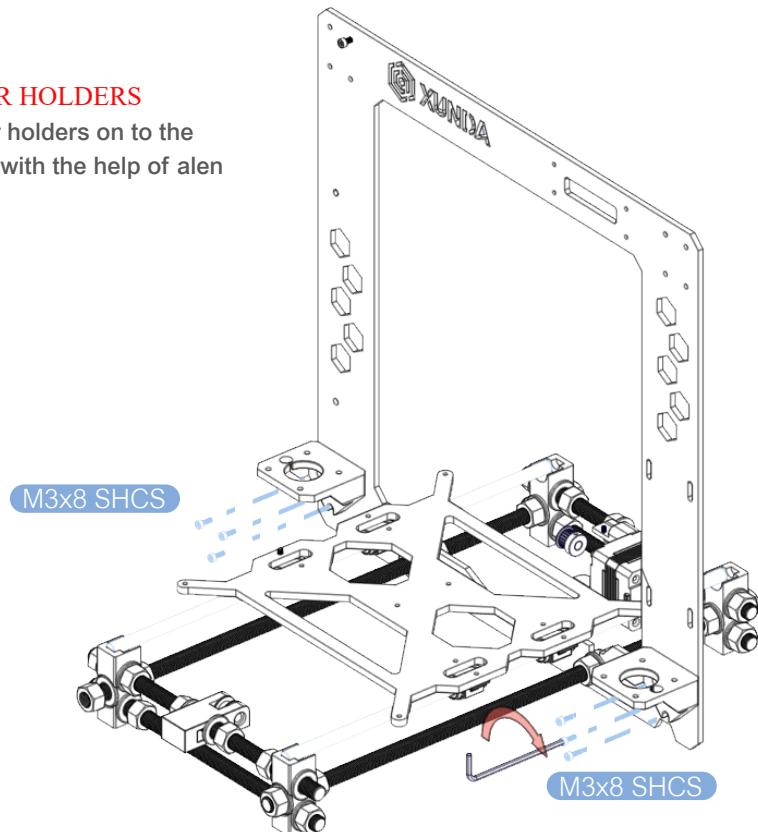
Take the right and left z-motor holders. align their three bolt holes with the bottom holes on the frame



<https://shorturl.at/HZi5V>

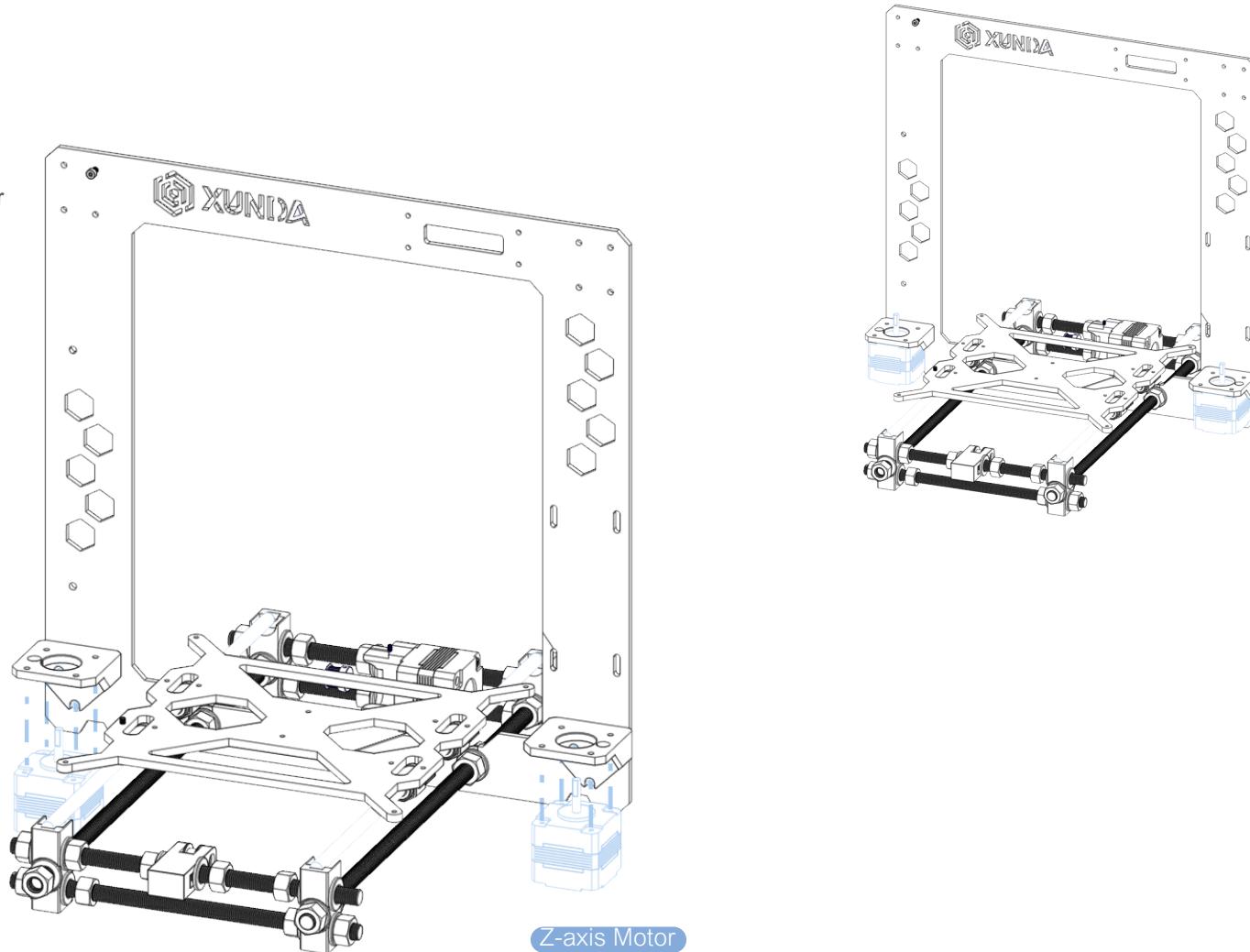
MOUNTING Z-MOTOR HOLDERS

Secure the z-axis motor holders on to the frame with M3x8 SHCS with the help of allen keys



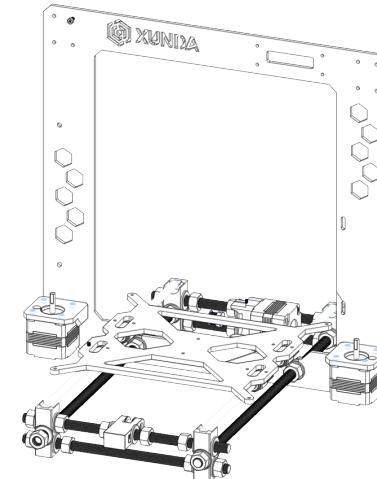
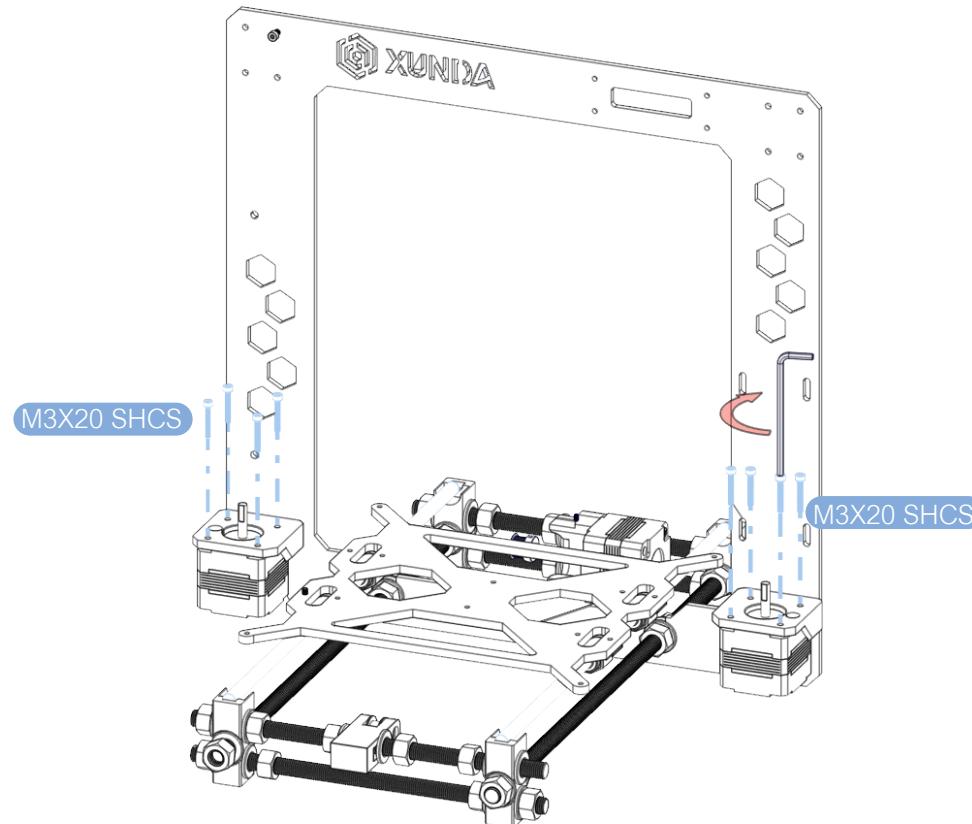
MOUNTING Z-AXIS MOTORS

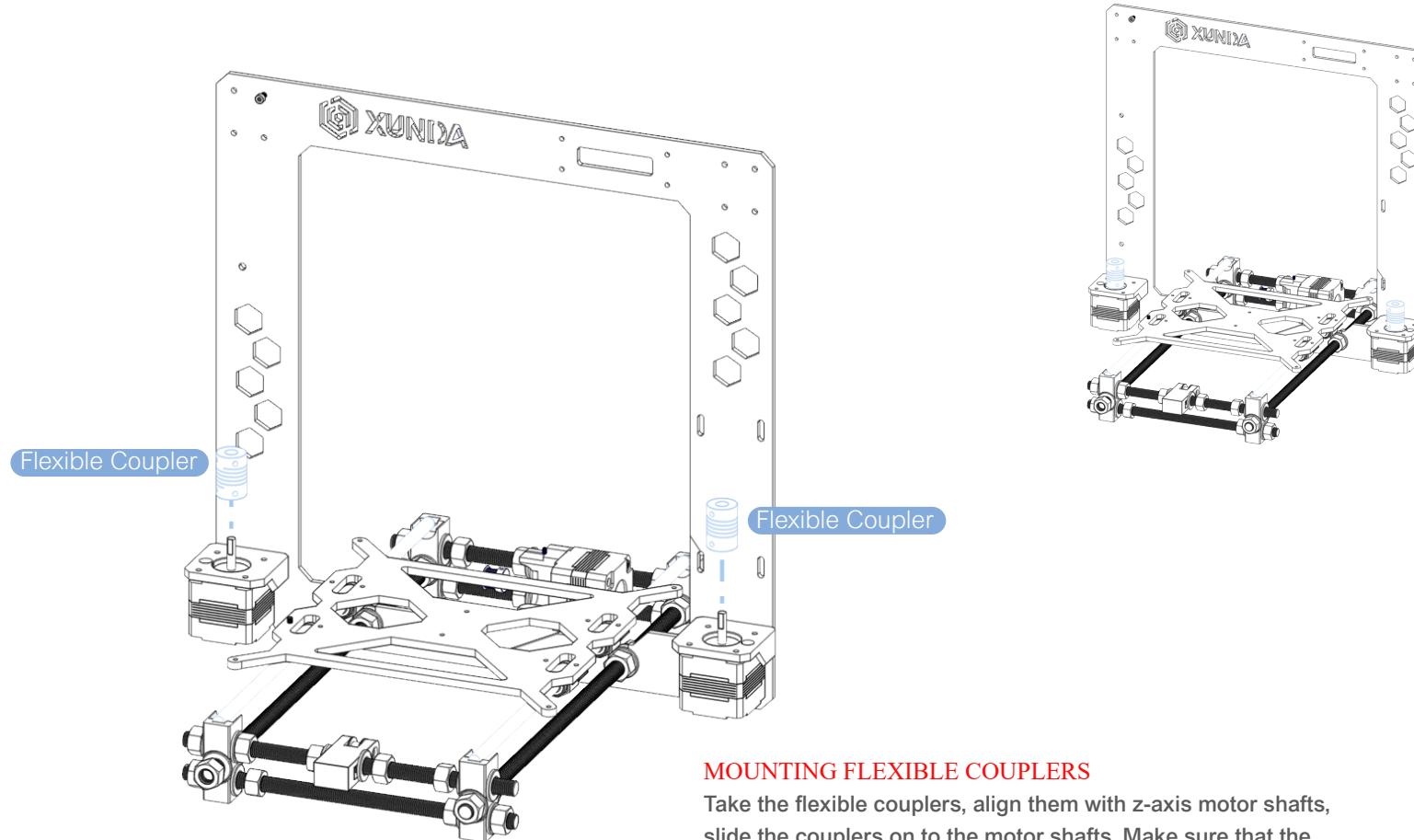
Take the z-axis motors and align the bolt holes on their top with those on the motor holders at the top

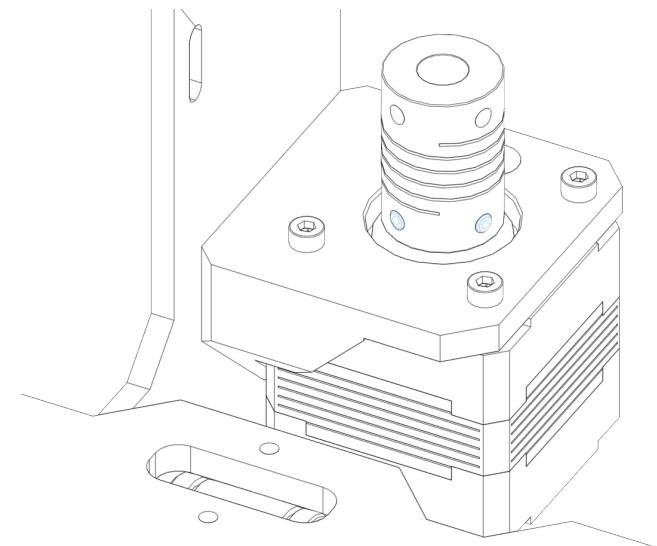
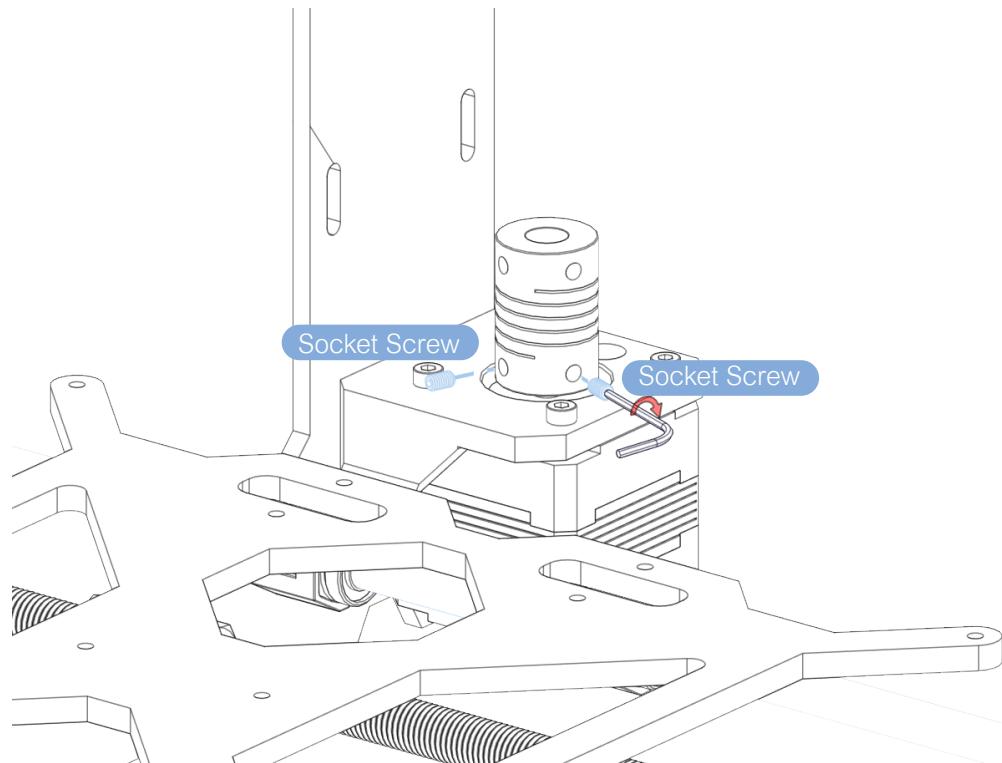


MOUNTING Z-AXIS MOTORS

Secure the z-axis motors to the motor holders using M3x20 SHCS with the help of allen keys as shown in the figure



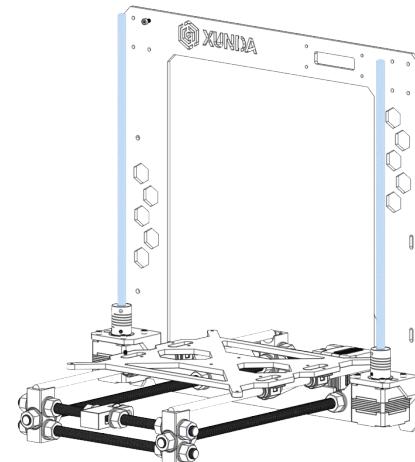
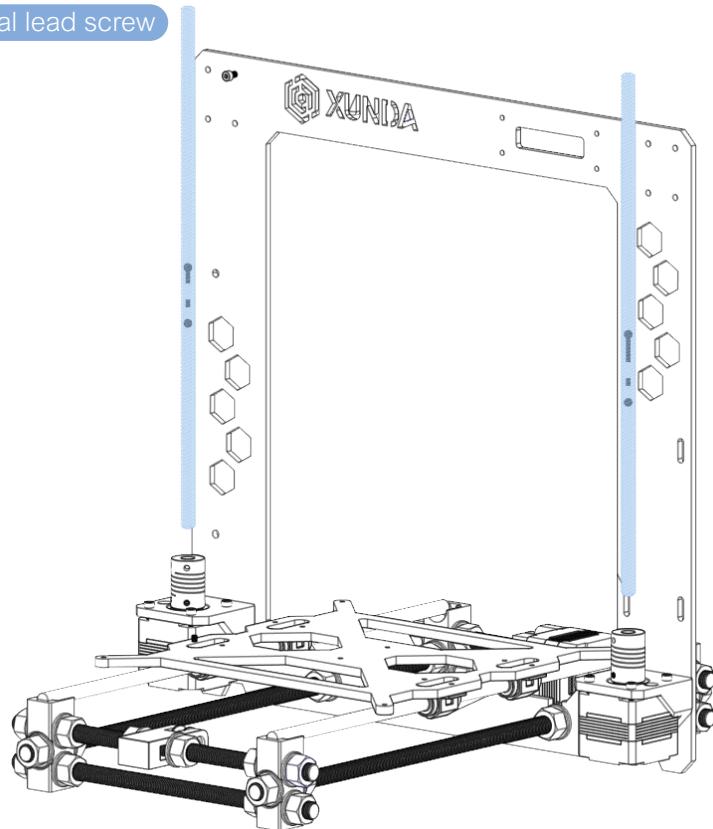




MOUNTING FLEXIBLE COUPLERS

Secure the flexible couplers on to the motor shafts using M3x5
Socket Set Screws with the help of allen keys

Trapezoidal lead screw

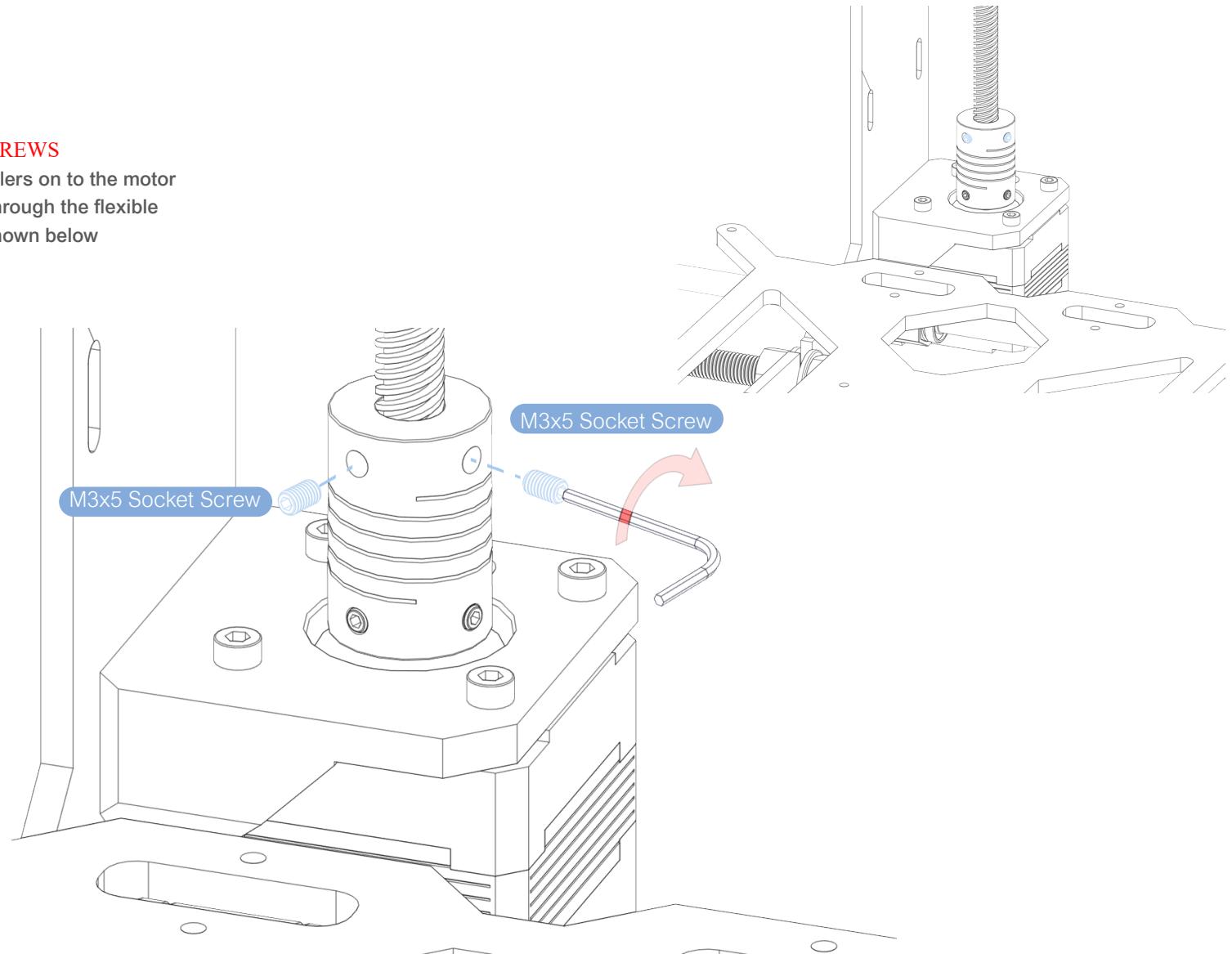


INSERTING TRAPEZOIDAL LEAD SCREWS

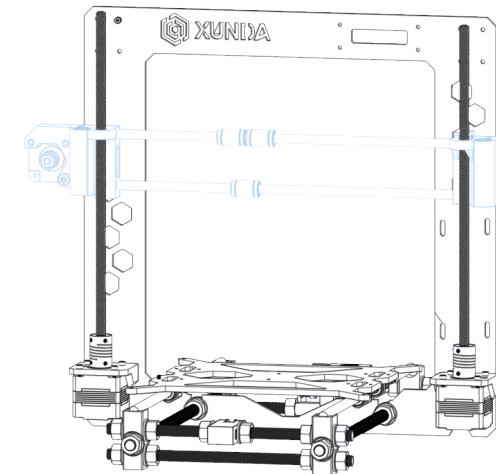
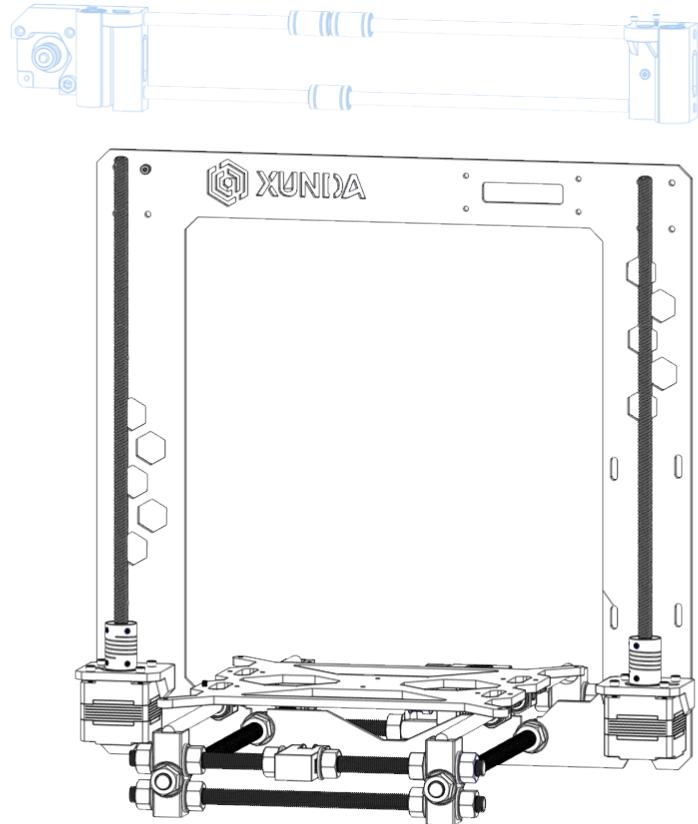
Take Trapezoidal lead screws, align them with flexible couplers and insert them into the flexible couplers in order to be joined to the motor shafts

INSERTING TRAPEZOIDAL LEAD SCREWS

Secure the trapezoidal lead screws couplers on to the motor shafts using M3x5 Socket Set Screws through the flexible couplers with the help of alen keys as shown below



X-axis assembly

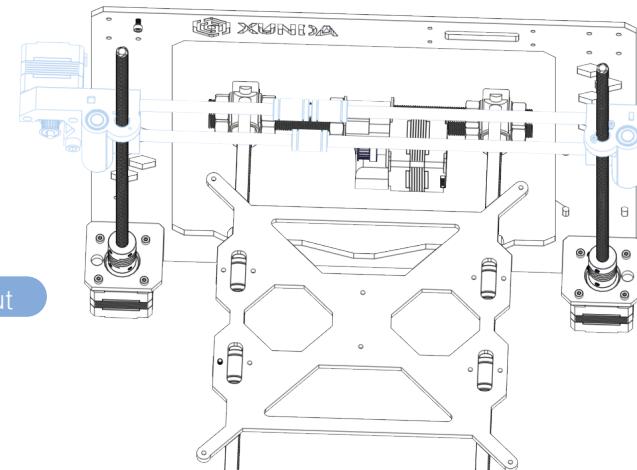
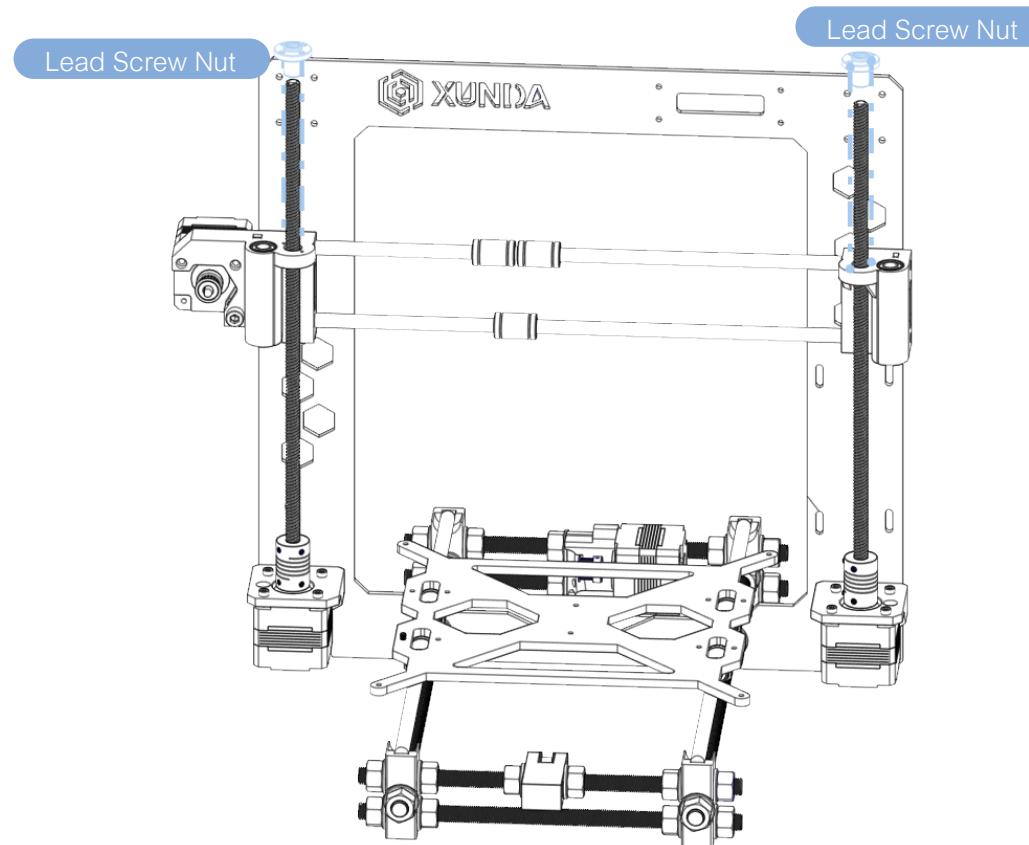


MOUNTING X-AXIS ASSEMBLY

Align the x-axis assembly created before with the trapezoidal lead screws as show. Gently slide the x-axis down through the trapezoidal lead screws

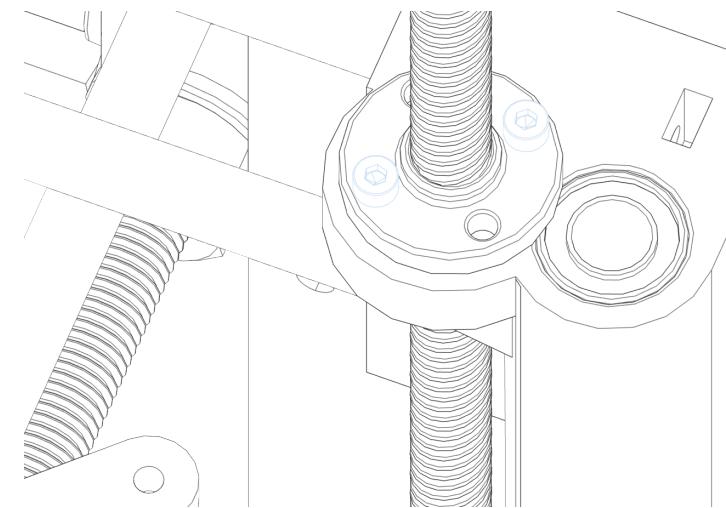
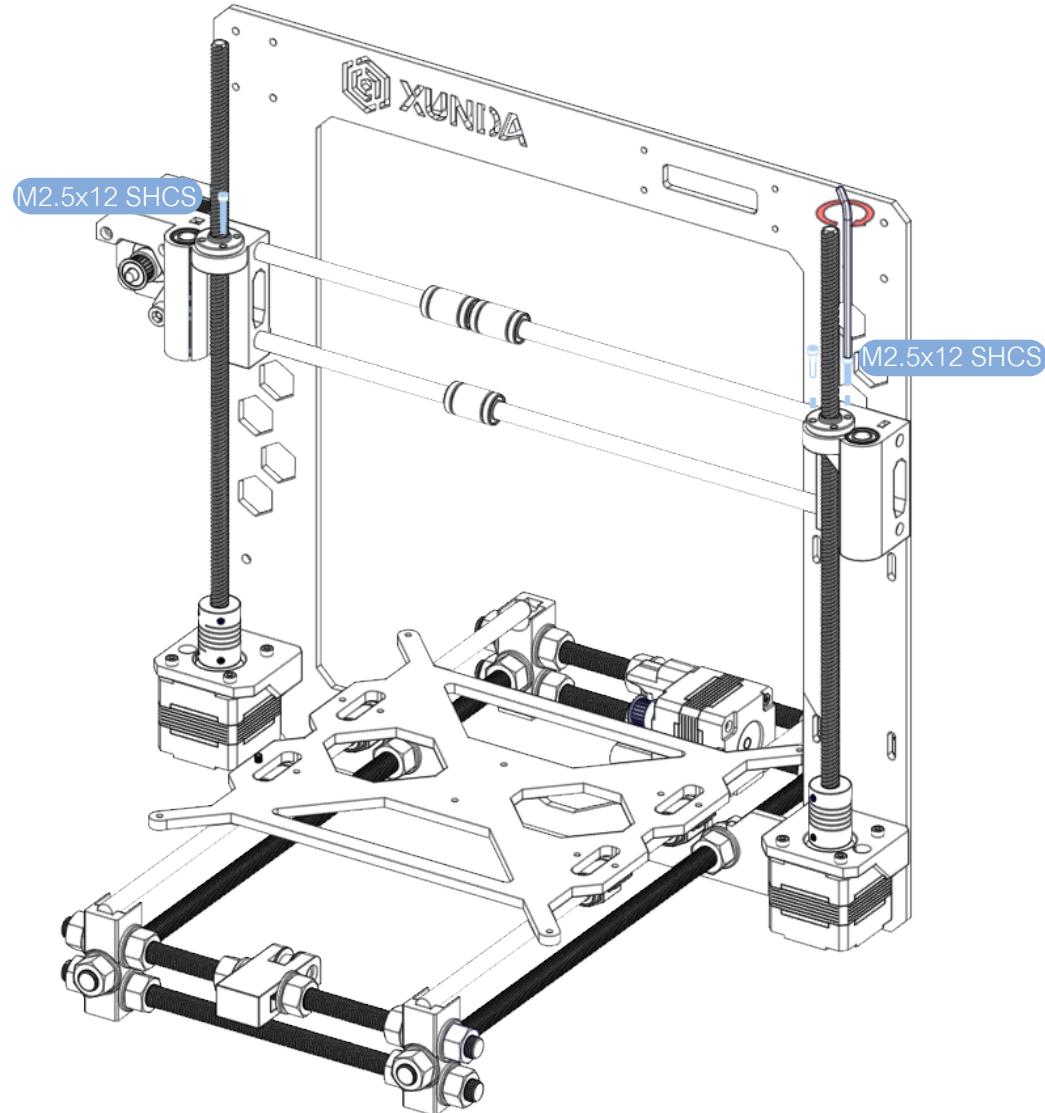
MOUNTING X-AXIS ASSEMBLY

Take the trapezoidal lead screw nuts, slide them down the lead screws and align the bolt holes with those on the printed parts.



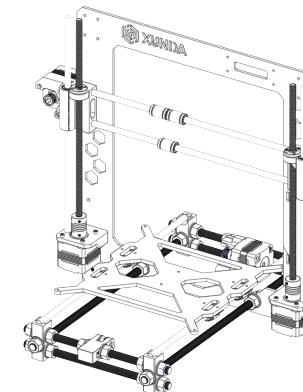
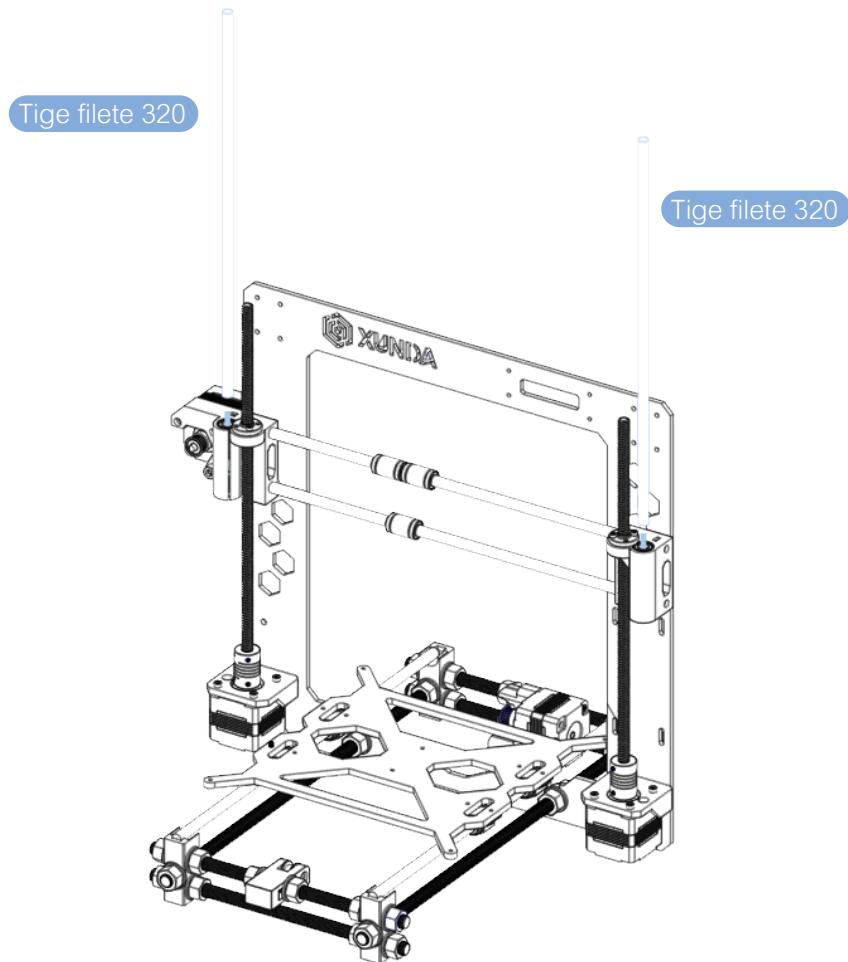
Z-AXIS ASSEMBLY

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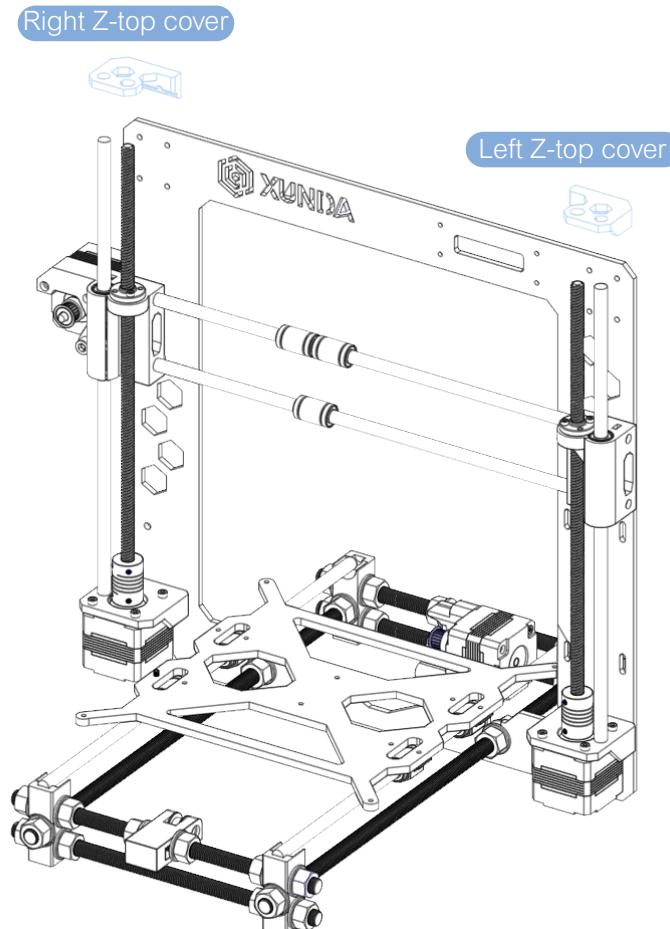
MOUNTING X-AXIS ASSEMBLY

Secure the X-axis assembly using M2.5x12 SHCS through the lead screw nuts with the help of alen keys



INSERTING SMOOTH RODS

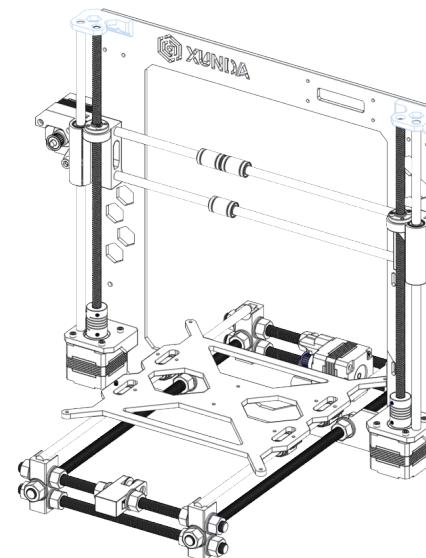
Slide the smooth rods (tige filete 320) through the linear bearings assembled in the printed parts until the motor top surface as shown in the figure.

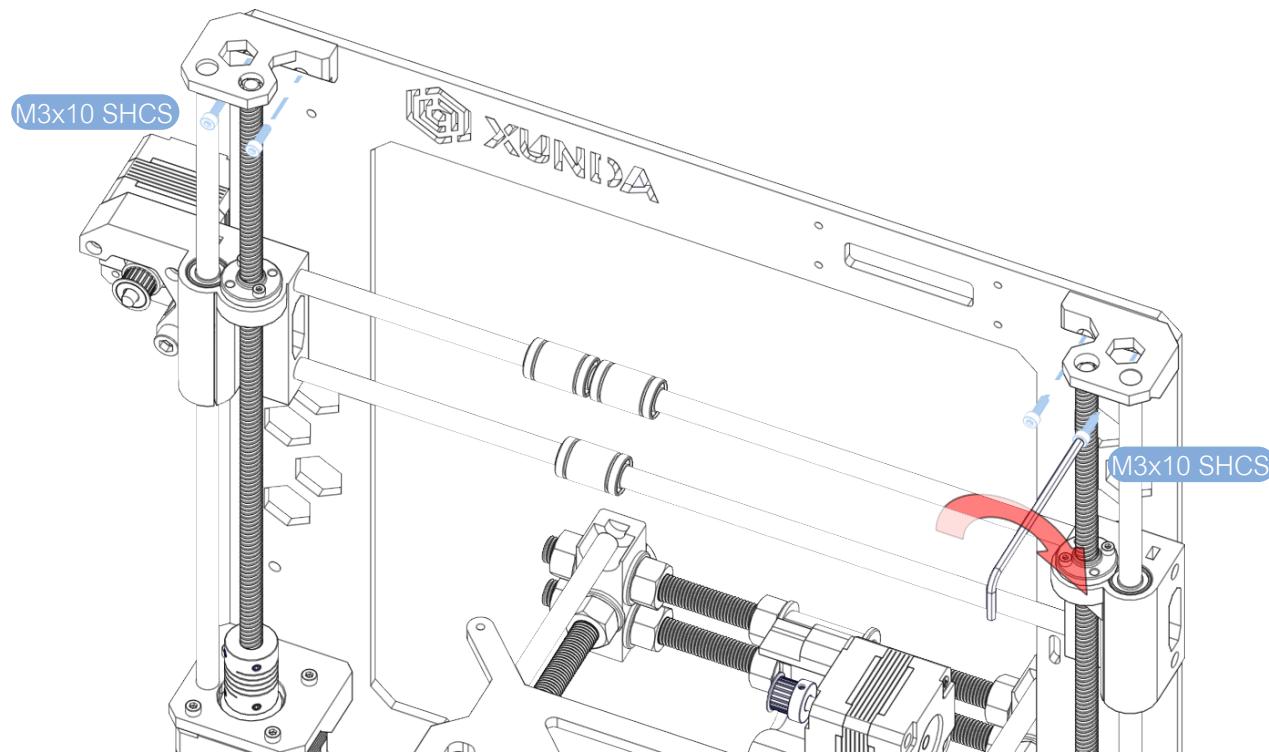


<https://shorturl.at/QlaOO>

INSERTING Z-AXIS TOP COVERS

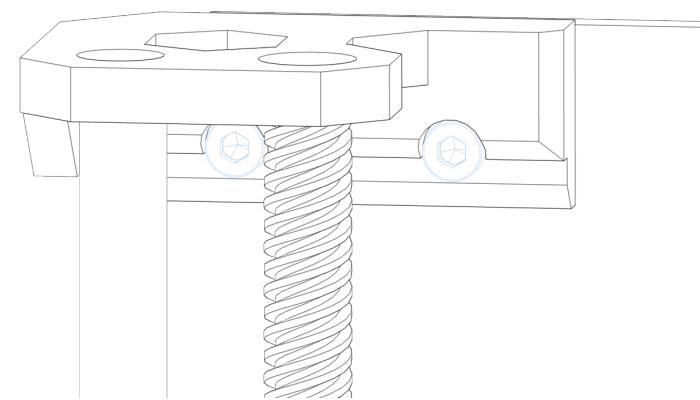
Take the z-top covers and align them with the trapezoidal lead screws and the smooth rods, fit them in at the top and their bolt holes made to align with the bolt holes at the frames





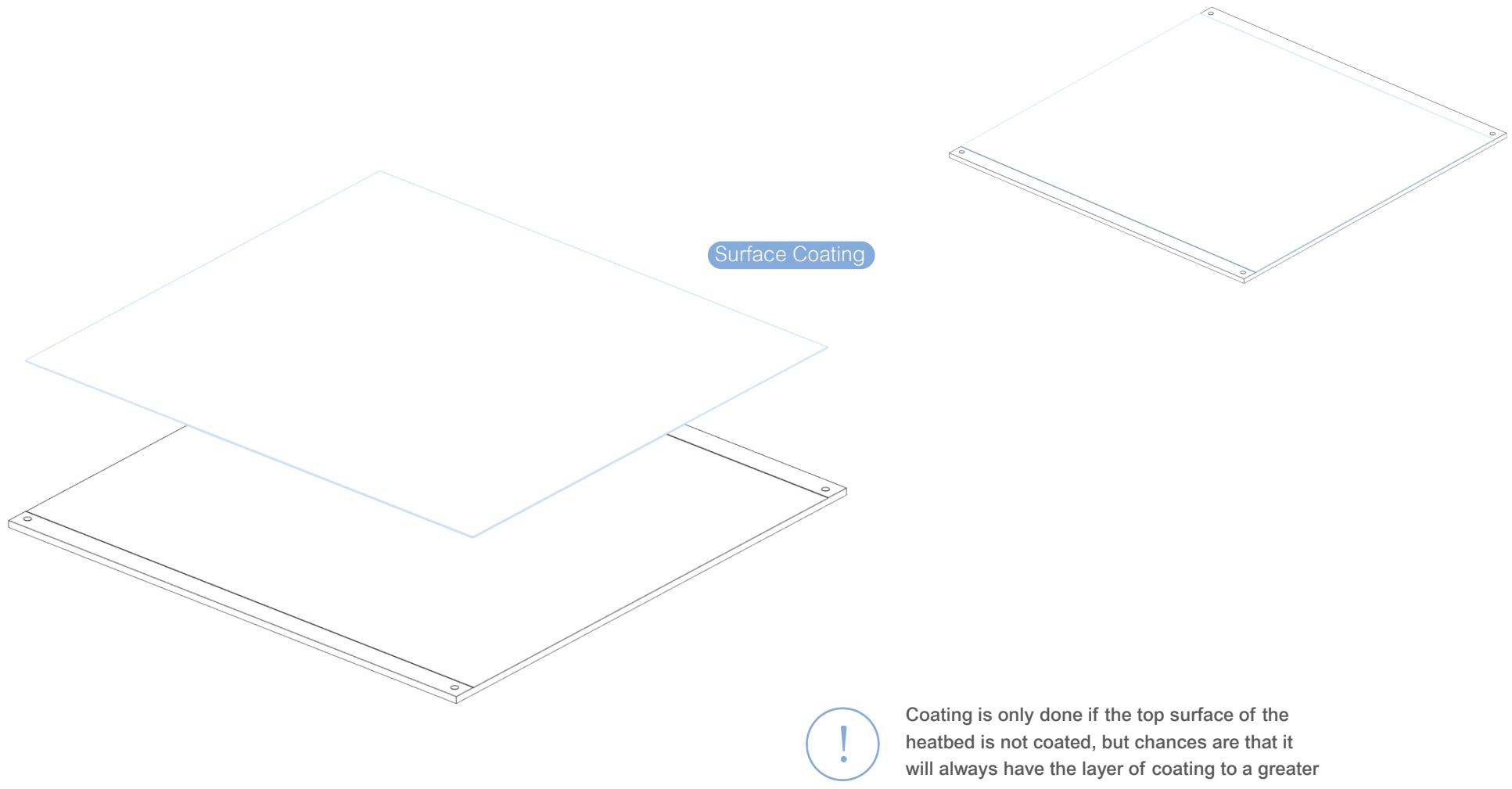
INSERTING Z-AXIS TOP COVERS

Secure the z-top covers on to the frame using M3x10 SHCS with the help of alen keys. Ensure that both the trapezoidal lead screw and the smooth rods are paralell to each other and perpendicular to the x-axis



PREPARING THE BASE PLATE

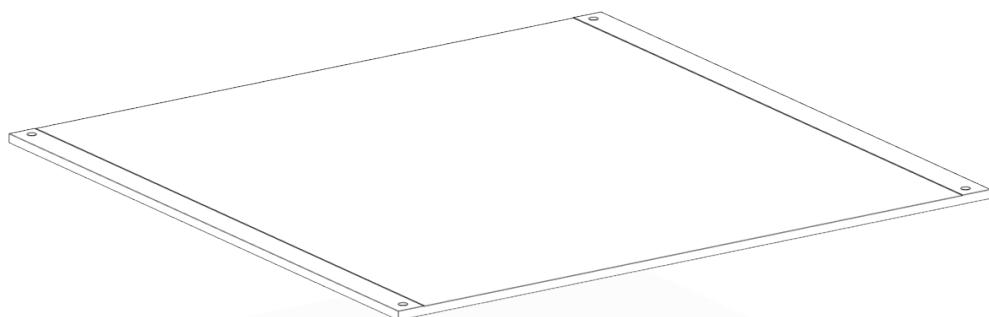
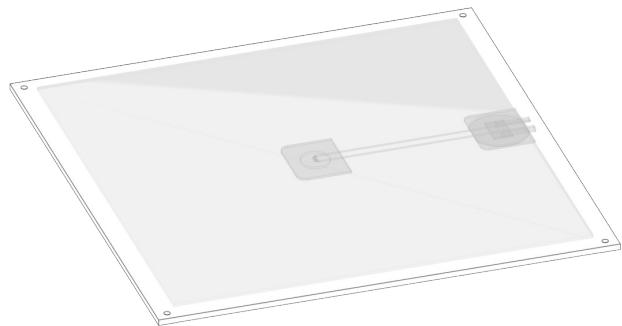
Cover the top surface of the base plate with a surface of coating as shown in the image



PREPARING THE BASE PLATE

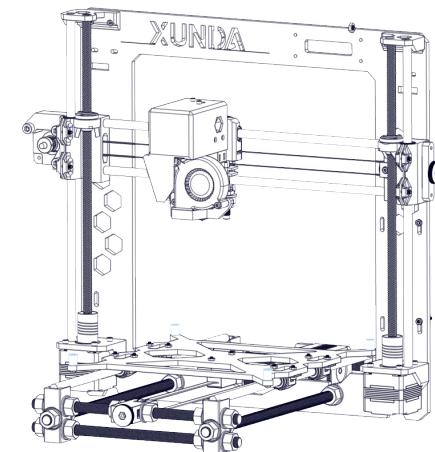
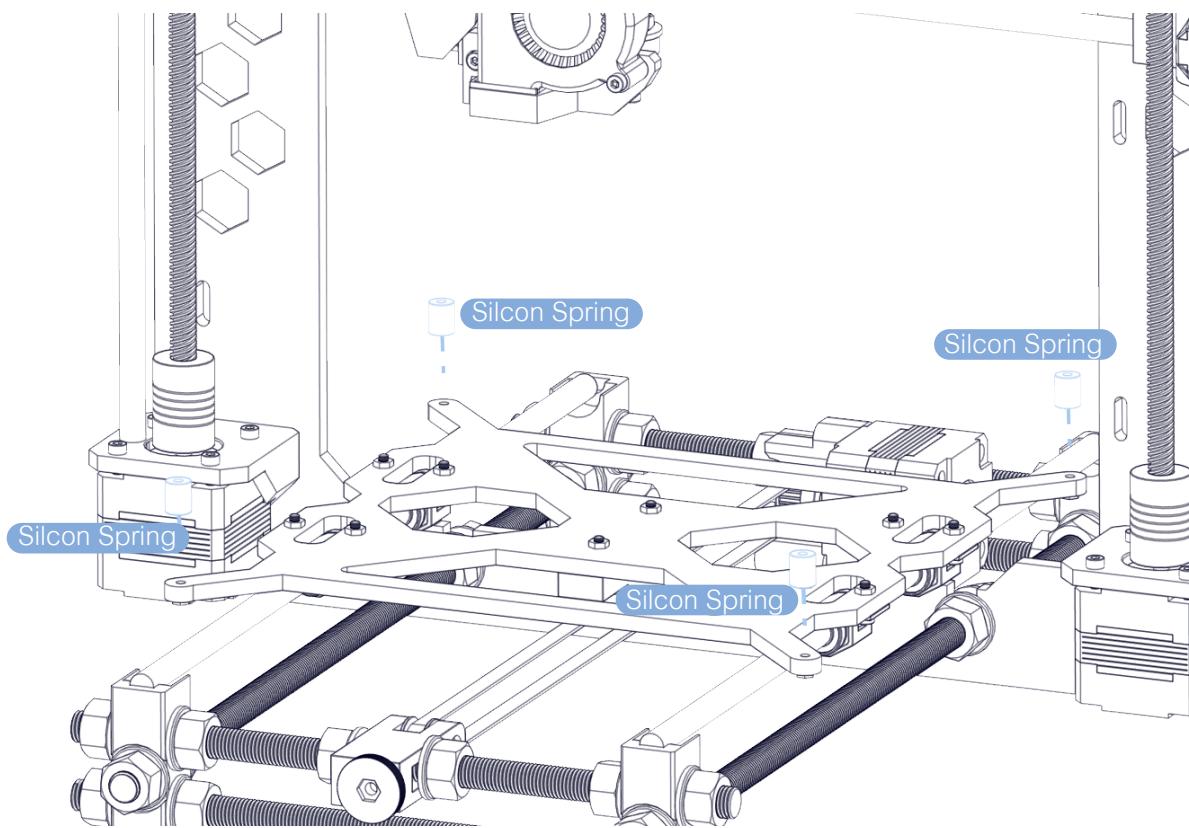
Clean the base plate bottom surface to remove dust or debris for proper adhesion of the heating surface.

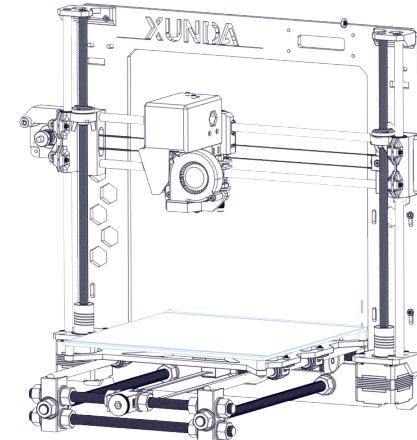
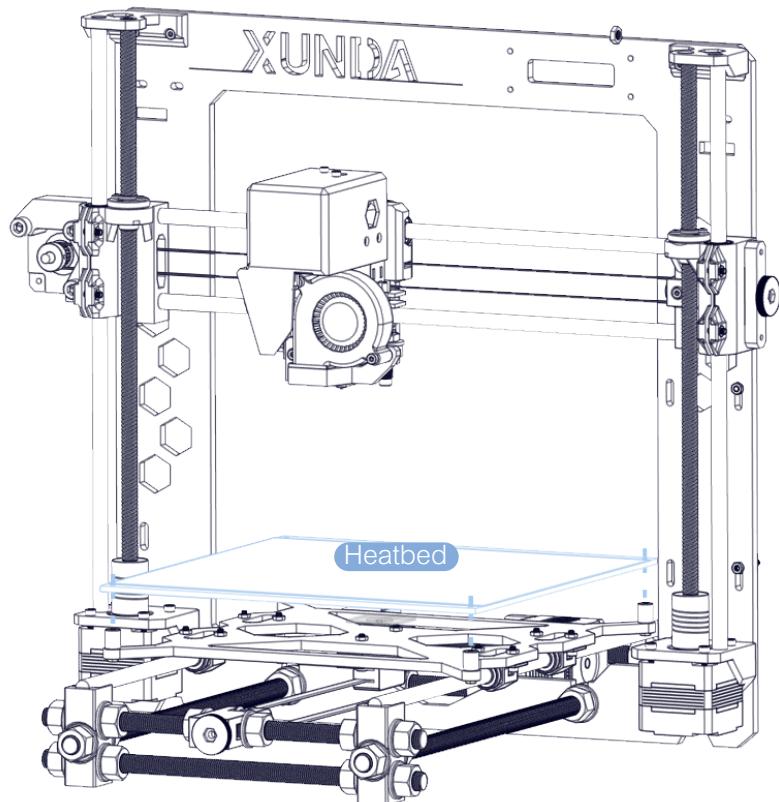
Position the heating surface correctly over the designated area



INSERTING SILICON SPRING

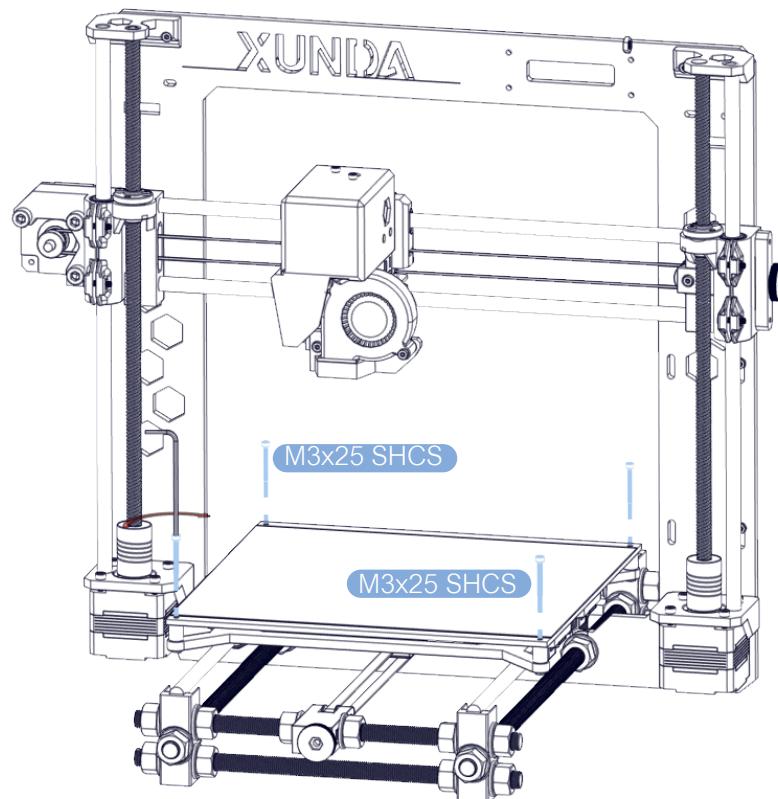
Align the silicon springs with the mounting holes found on the y-carriage as shown in the image





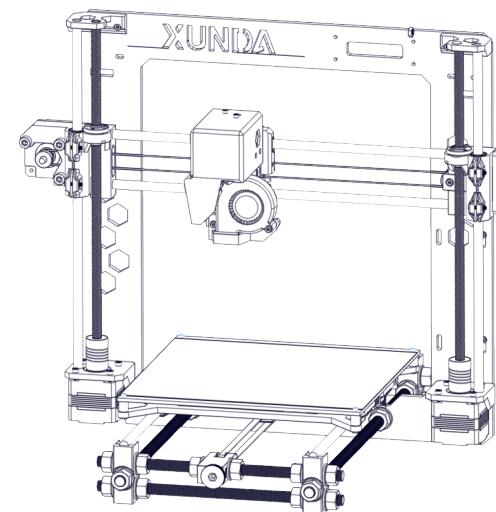
ATTACHING HEATBED

Align the heatbed mounting holes with the holes found on the silicon springs and position the heatbed on the springs.



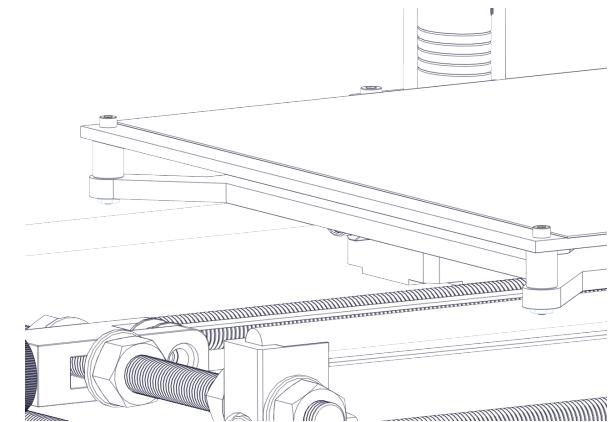
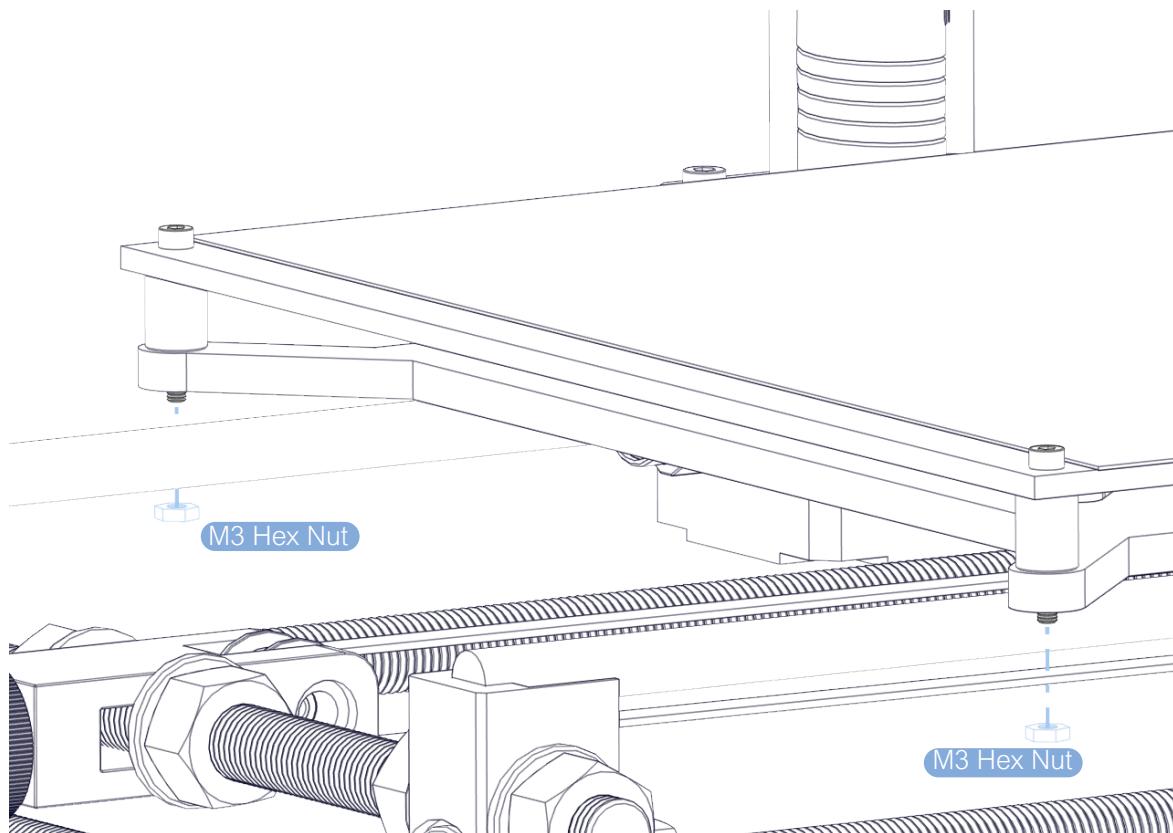
ATTACHING HEATBED

Take four M3x25 SHCS and insert them into the heatbed mounting holes



BED ASSEMBLY

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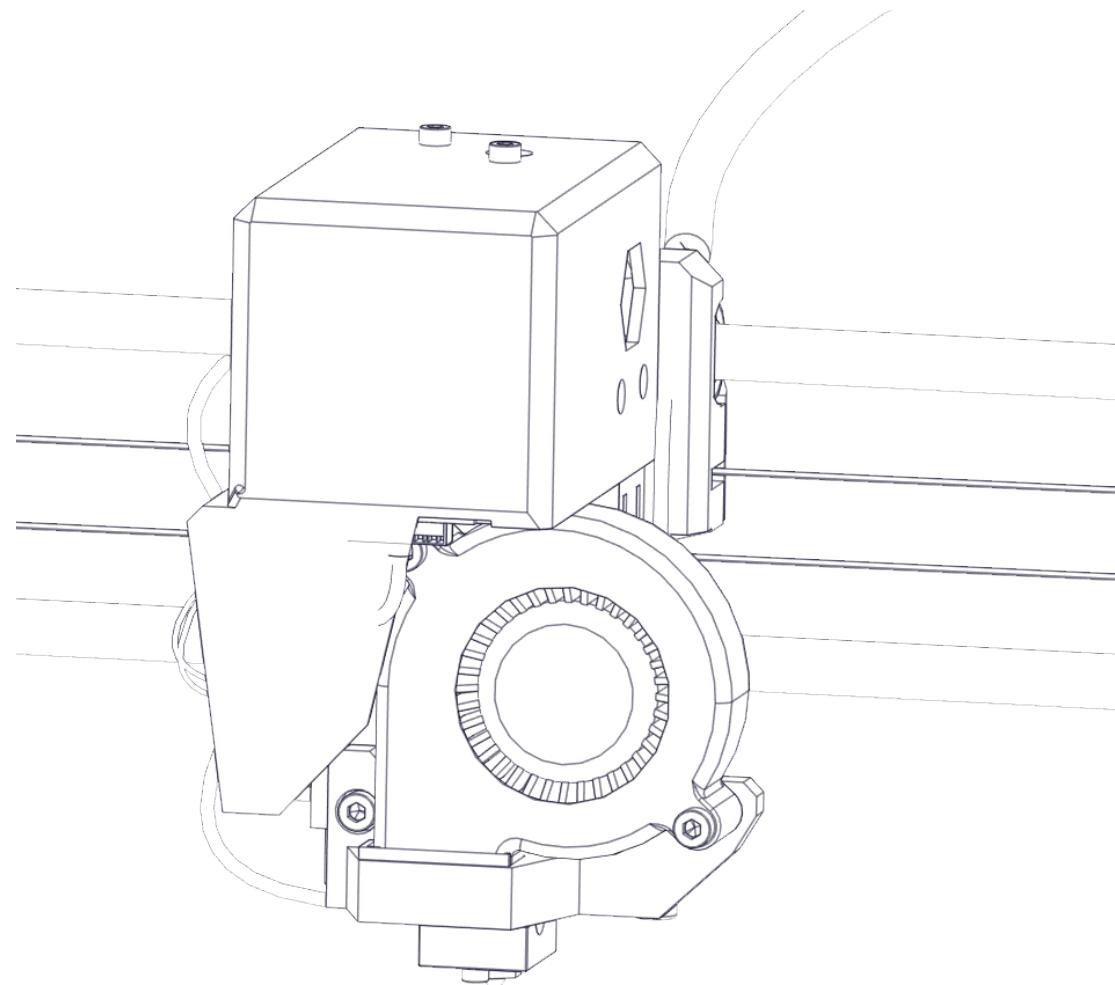


ATTACHING HEATBED

Secure the heatbed onto the y-carriage by inserting and tightening with M3 hex Nuts

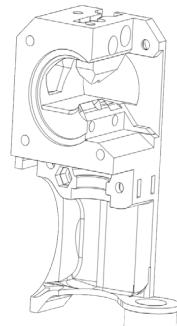
EXTRUDER ASSEMBLY

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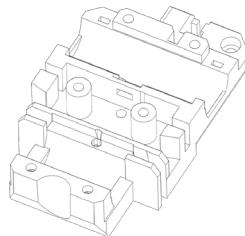
EXTRUDER ASSEMBLY

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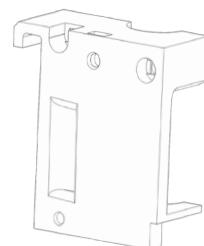
EXTRUDER BODY

Houses the drive mechanism and supports filament feeding, ensuring smooth and controlled extrusion during printing.



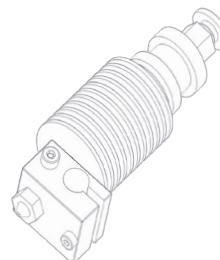
X-CARRIAGE

It carries other extruder components onto the support (x-axis)



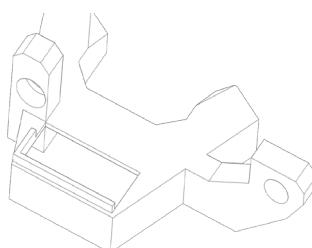
EXTRUDER COVER

Part that is used to hold the Hot-end onto the extruder body



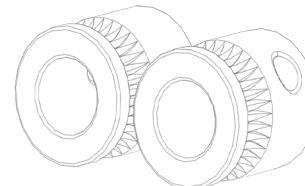
HOT-END

Hot-end melts and extrudes filament through the nozzle, ensuring precise layer deposition for accurate prints.



NOZZLE FAN HOLDER

Printed part used to hold the nozzle fan

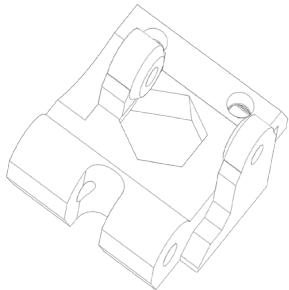


EXTRUDER PULLEY

Pulleys used to pass the material into the hot-end

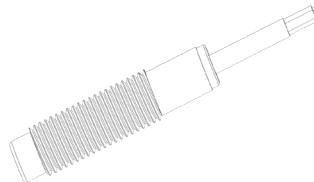
EXTRUDER ASSEMBLY

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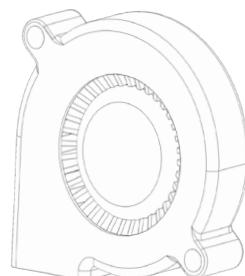
EXTRUDER IDLER

Extruder idler used to hold the extruder pulley



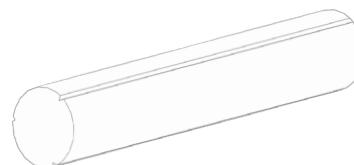
SUPER PINDA

Detects bed leveling inconsistencies, ensuring precise first-layer adhesion by adjusting the nozzle height



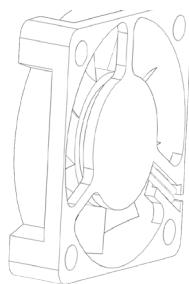
BLOWER FAN

Directs airflow precisely to cool printed layers, improving adhesion and reducing warping.



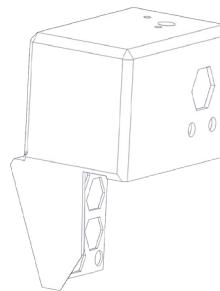
GROOVE PIN

Used to hold the extruder pulley onto the idler



NOZZLE FAN

Prevents overheating, improves print quality, and ensures proper filament extrusion by maintaining optimal temperature.



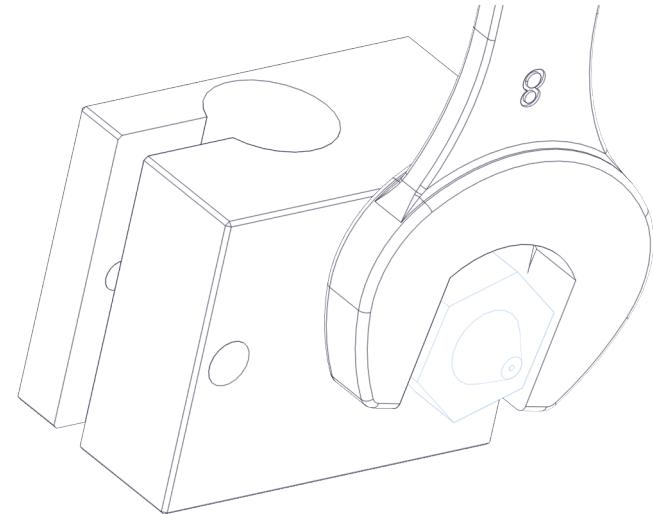
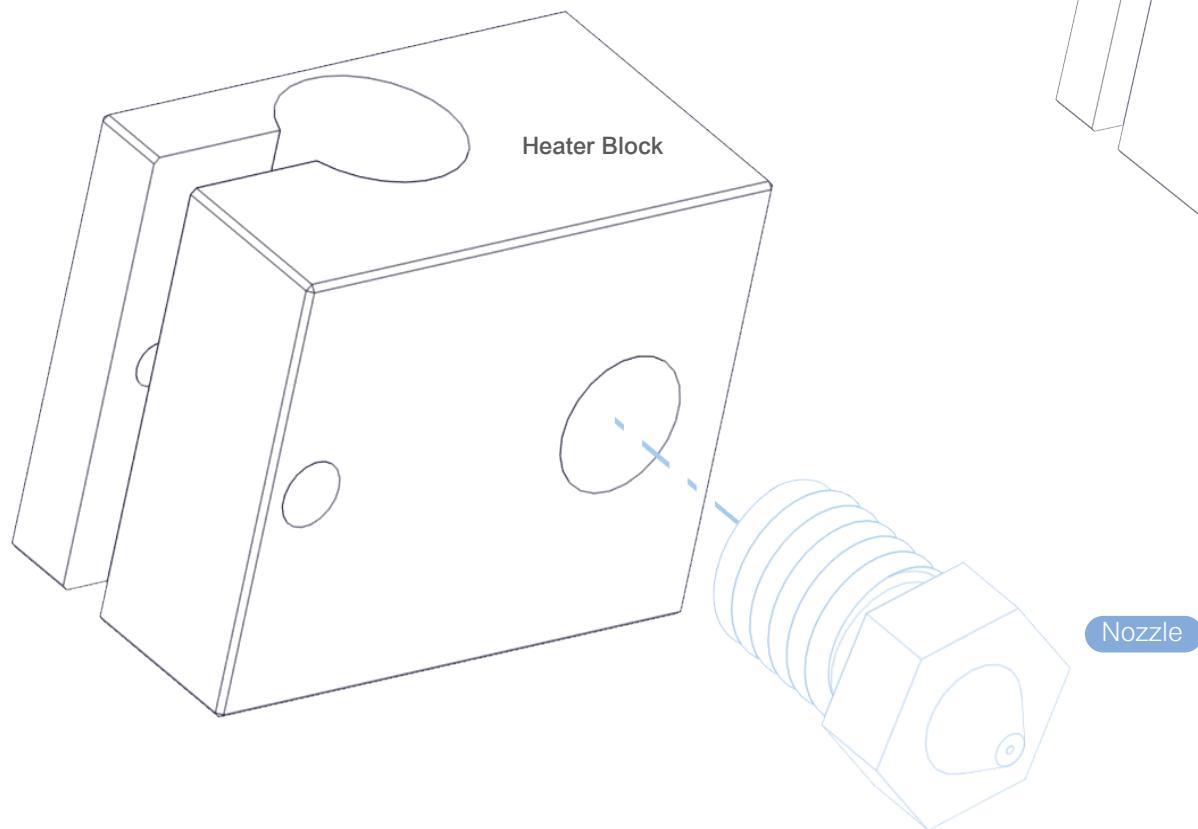
SHIELD

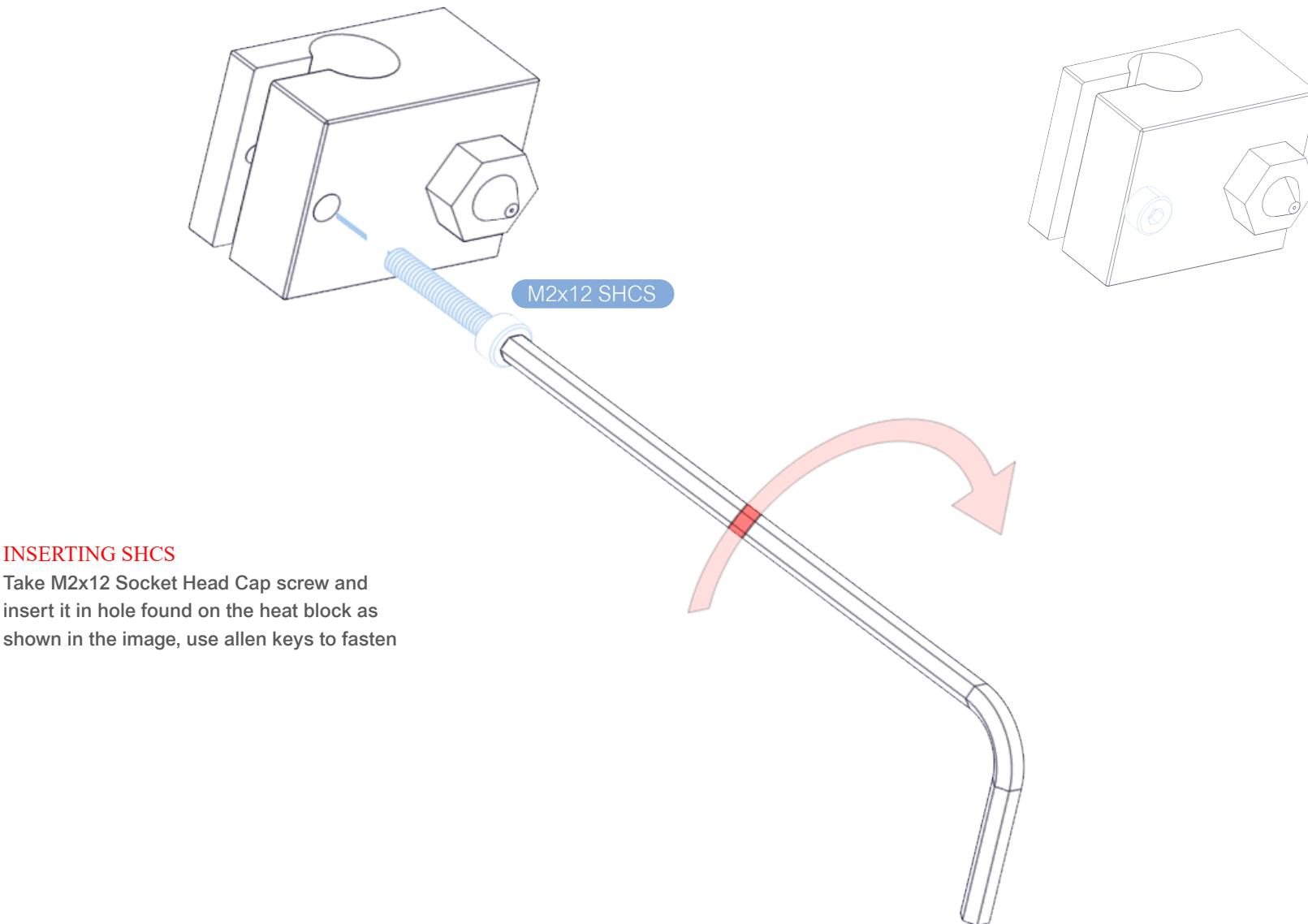
The shield is used to protect the inside components of the extruder.

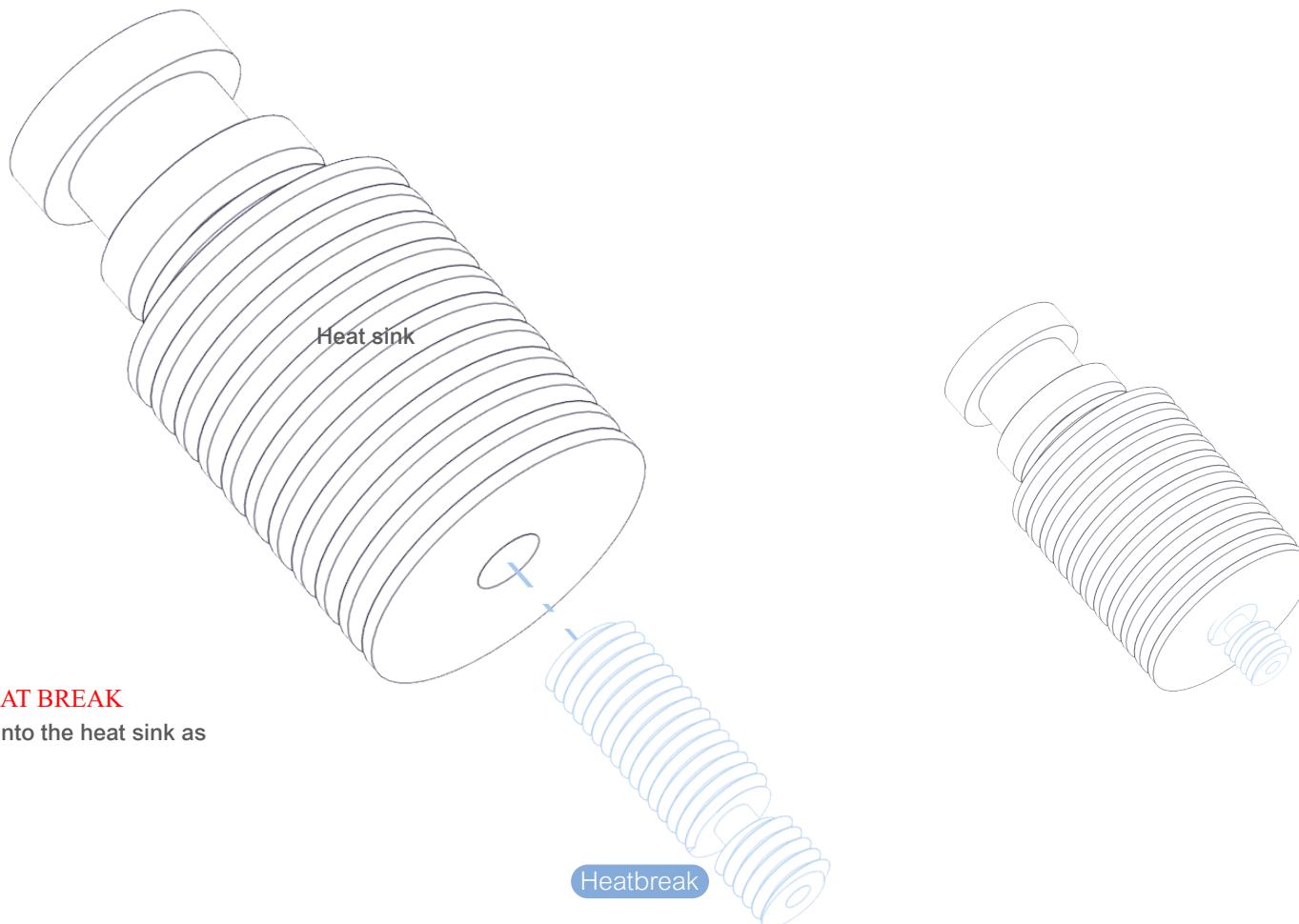
PREPARING THE HOT-END

INSERTING THE NOZZLE

Take the nozzle, align it with the heater block,
carefully insert and tighten with the use of
8mm wrenches

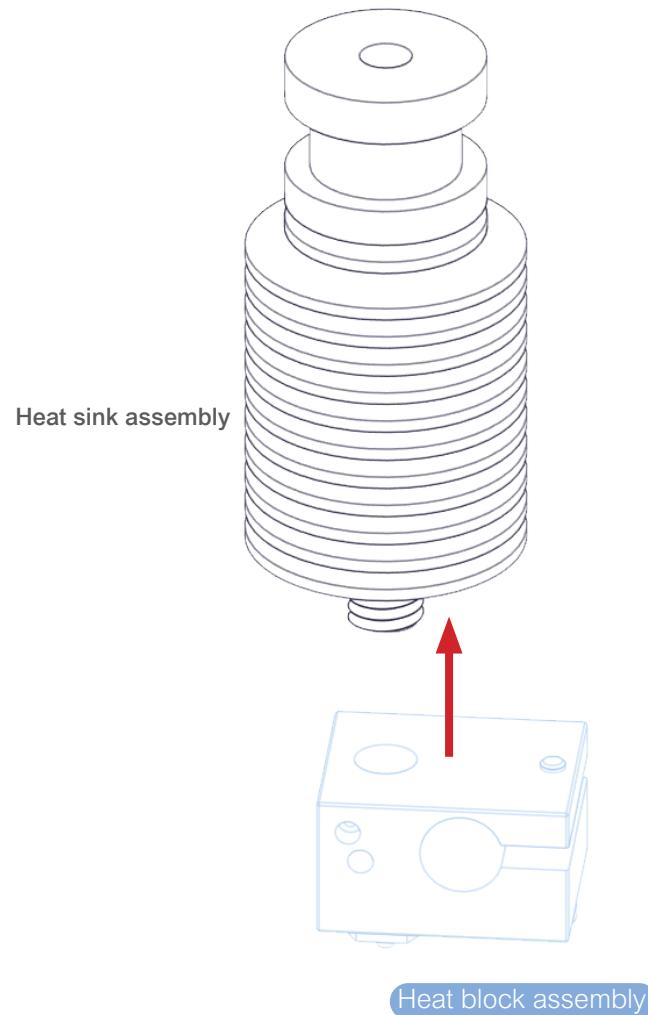






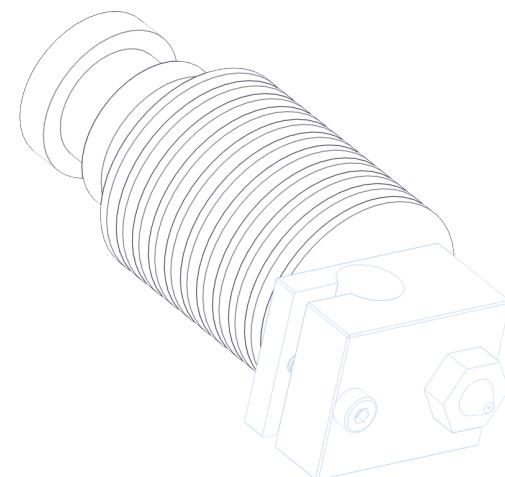
INSERTING THE HEAT BREAK

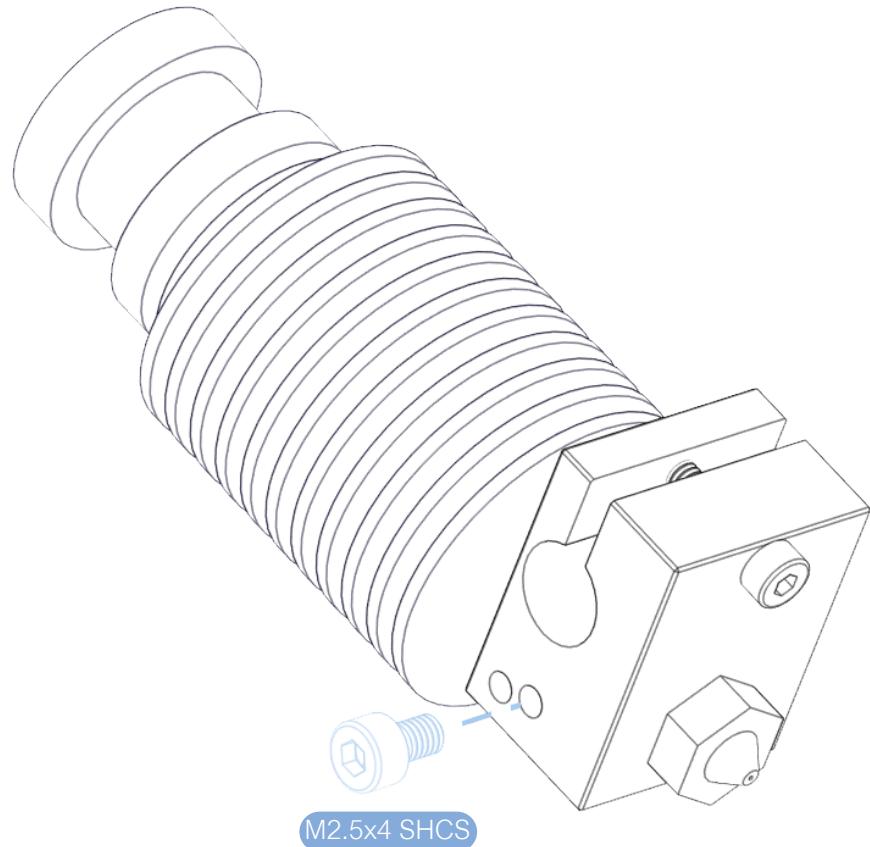
Insert the heat break into the heat sink as shown in the image



JOINING THE HEAT-SINK AND HEAT BLOCK

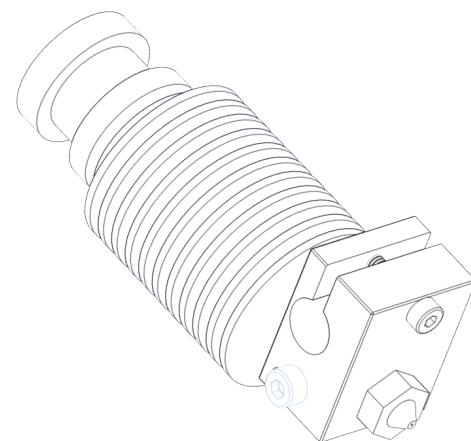
Join the heat-sink and heat block assemblies by directing the heat-break into the hole found on top of the heat block as shown in the image

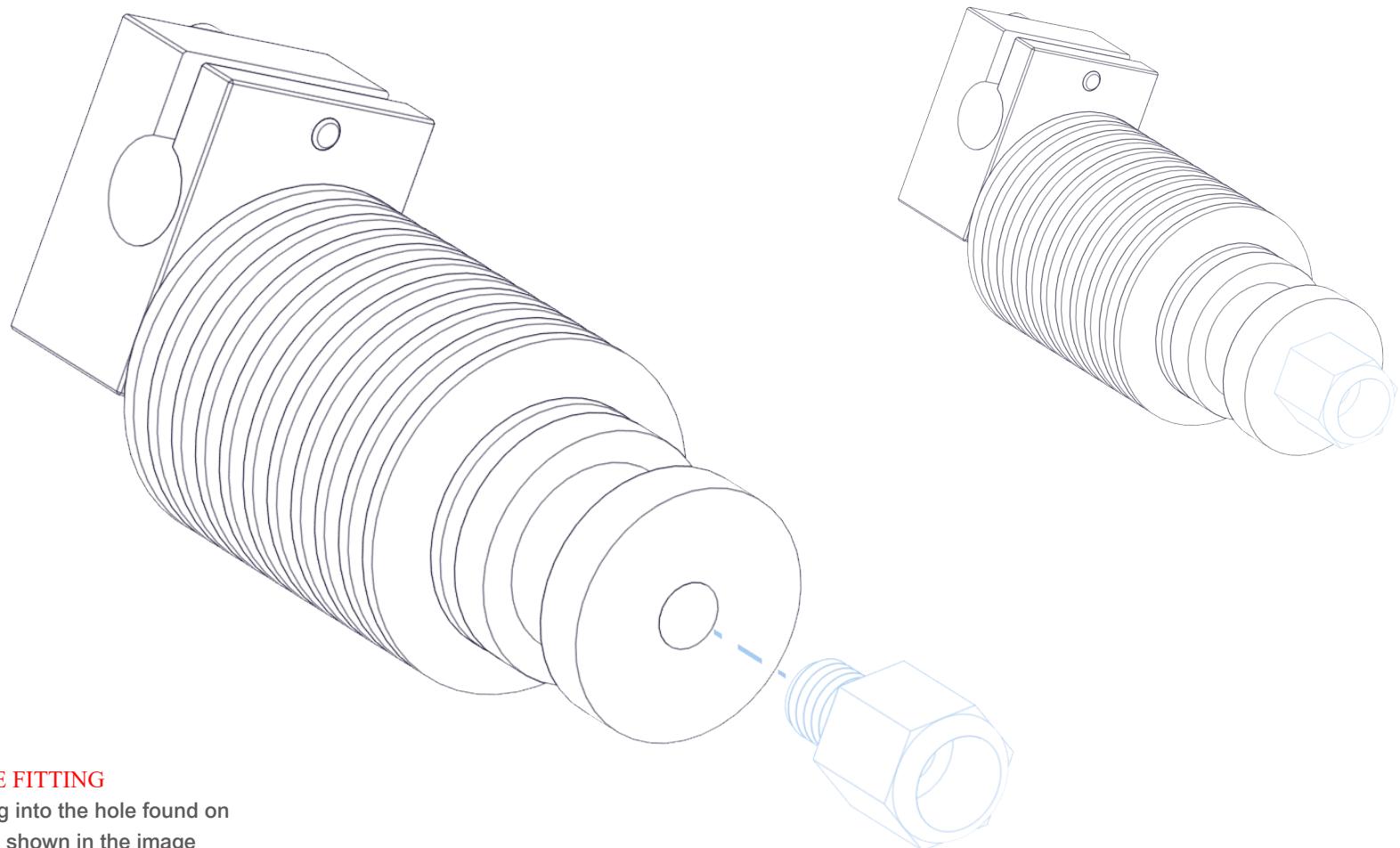




INSERTING SHCS

Insert M2.5x4 SCHCS into the hole found on one of the sides of the heat block as shown in the image

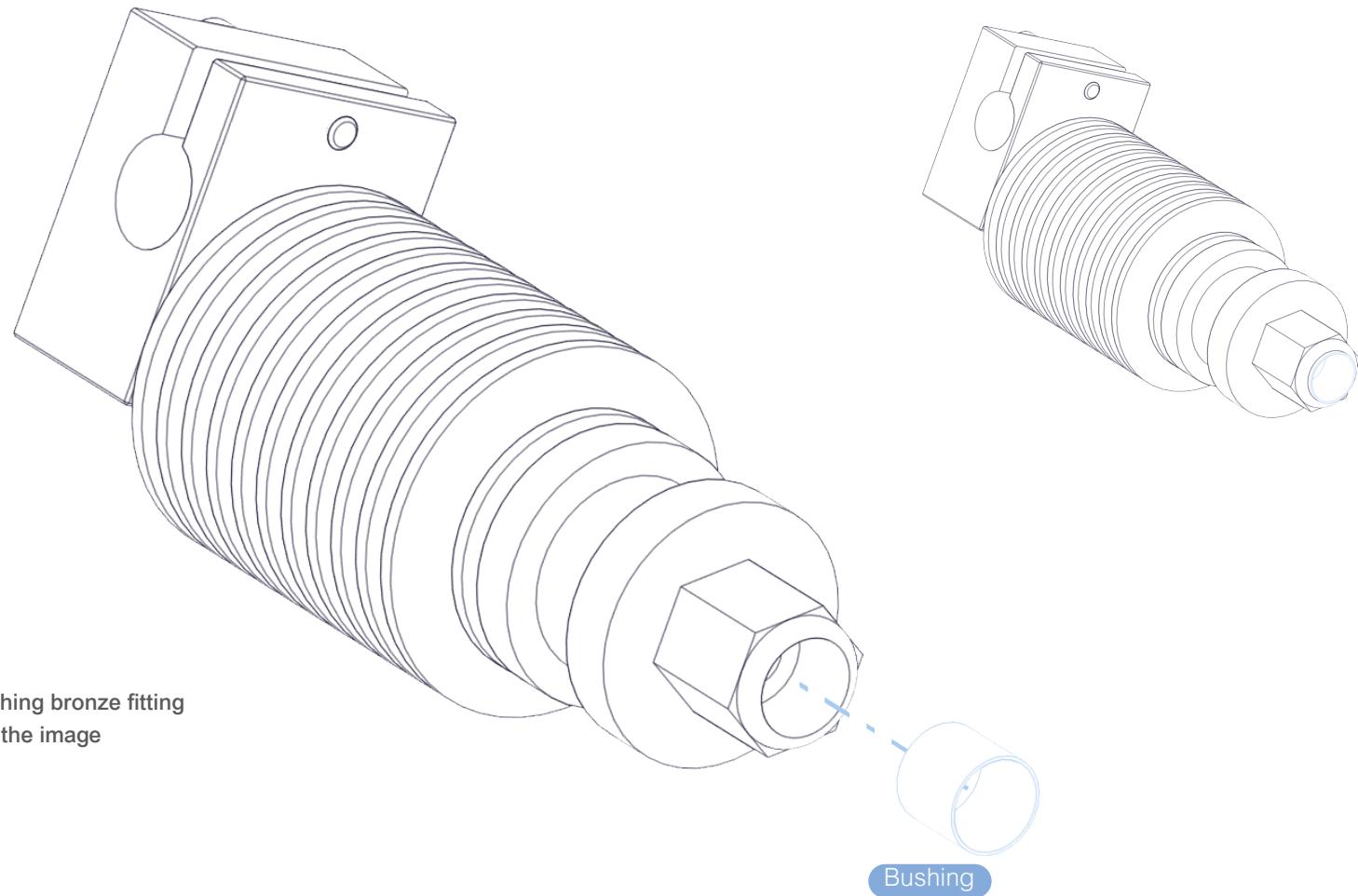




INSERTING BRONZE FITTING

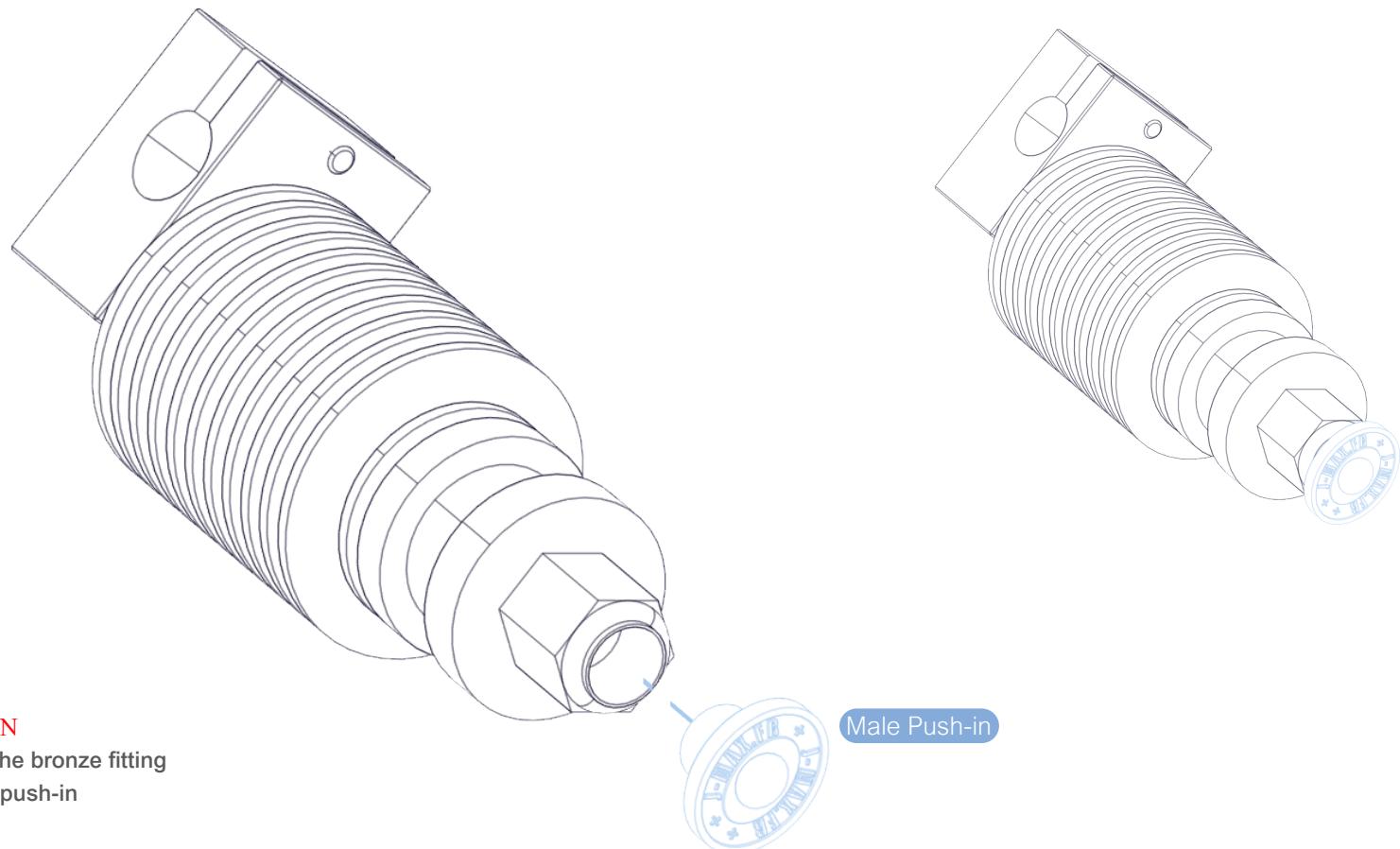
Insert the bronze fitting into the hole found on top of the heat sink as shown in the image

Bronze fitting



INSERTING BUSHING

Align the male push-in bushing bronze fitting and insert it in as shown in the image

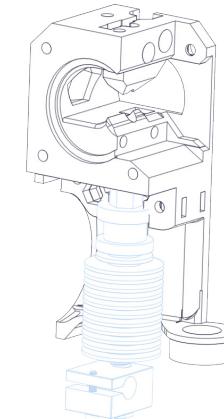
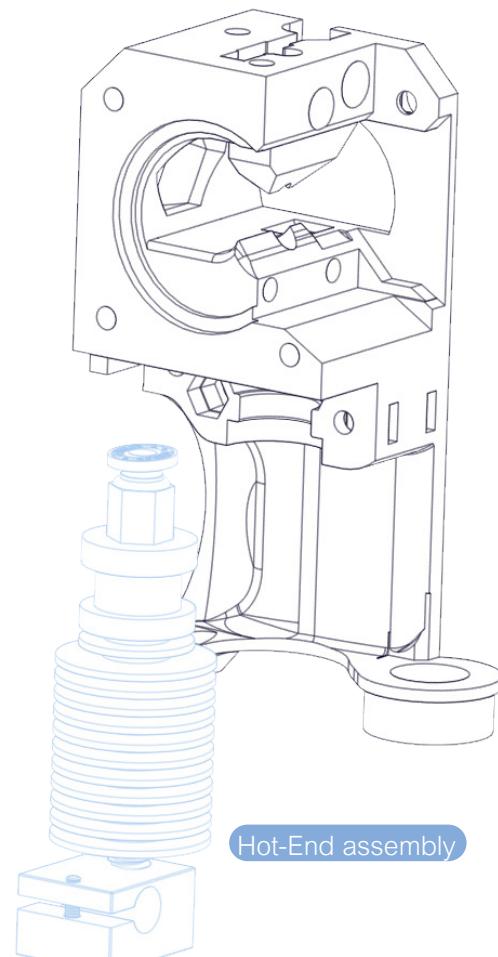


INSERTING MALE PUSH-IN

Align the male push-in with the bronze fitting as shown and fit in the male push-in

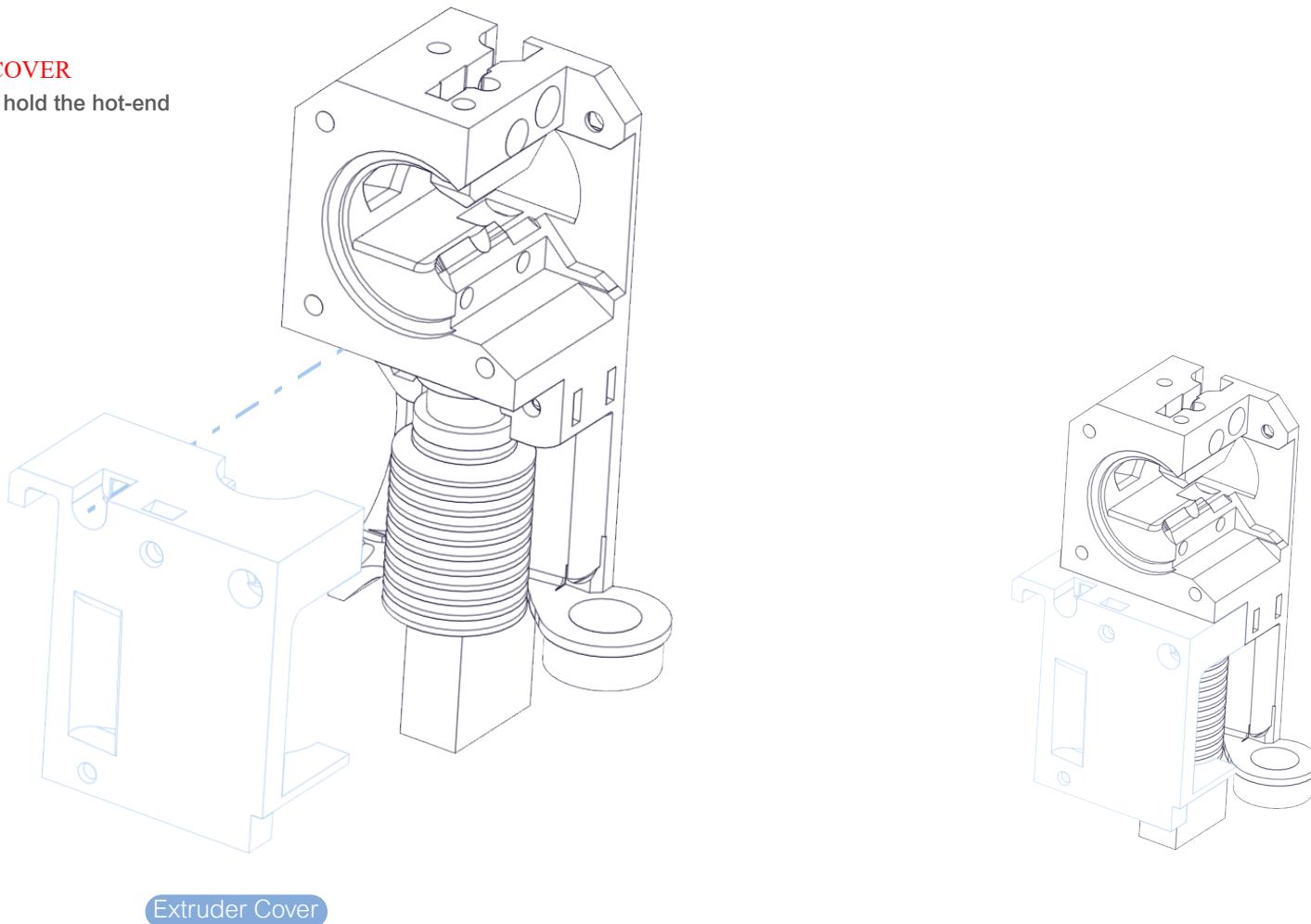
INSERTING HOT-END

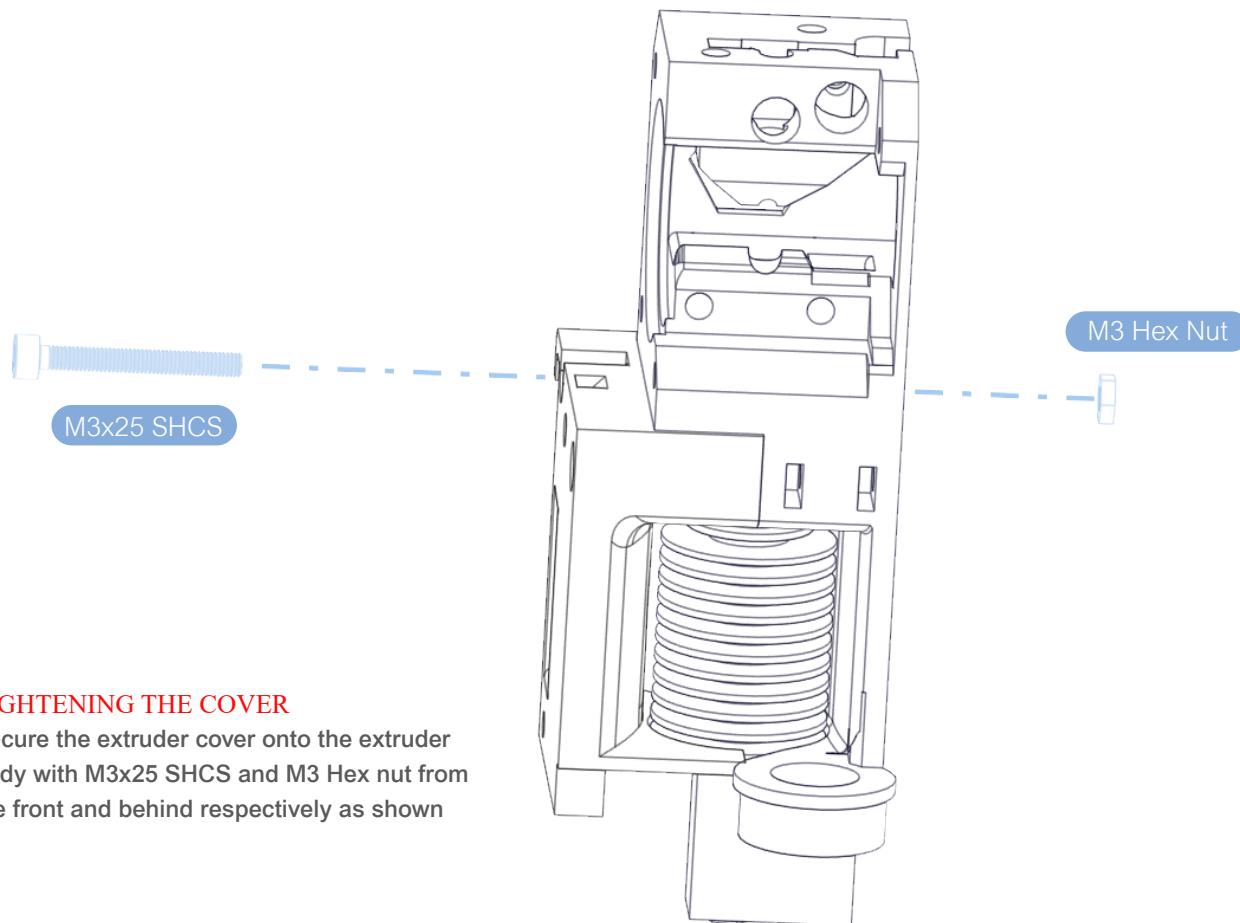
Insert the hot-end which was assembled previously onto the extruder body as shown



INSERTING EXTRUDER COVER

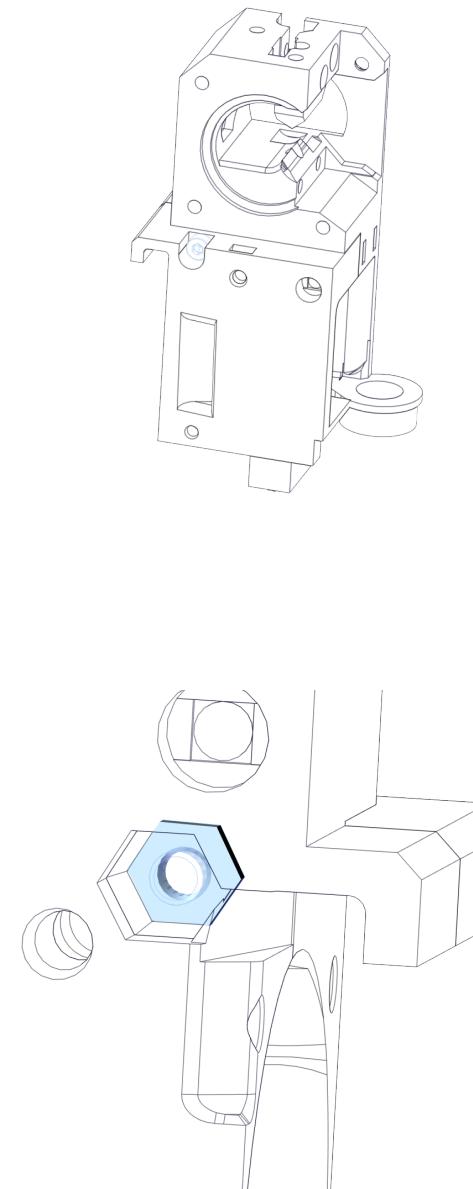
Attach the extruder cover to hold the hot-end in place





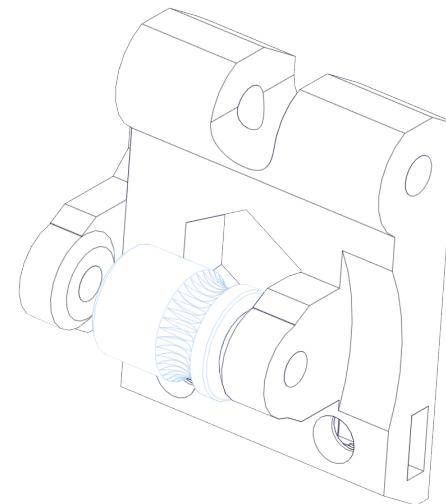
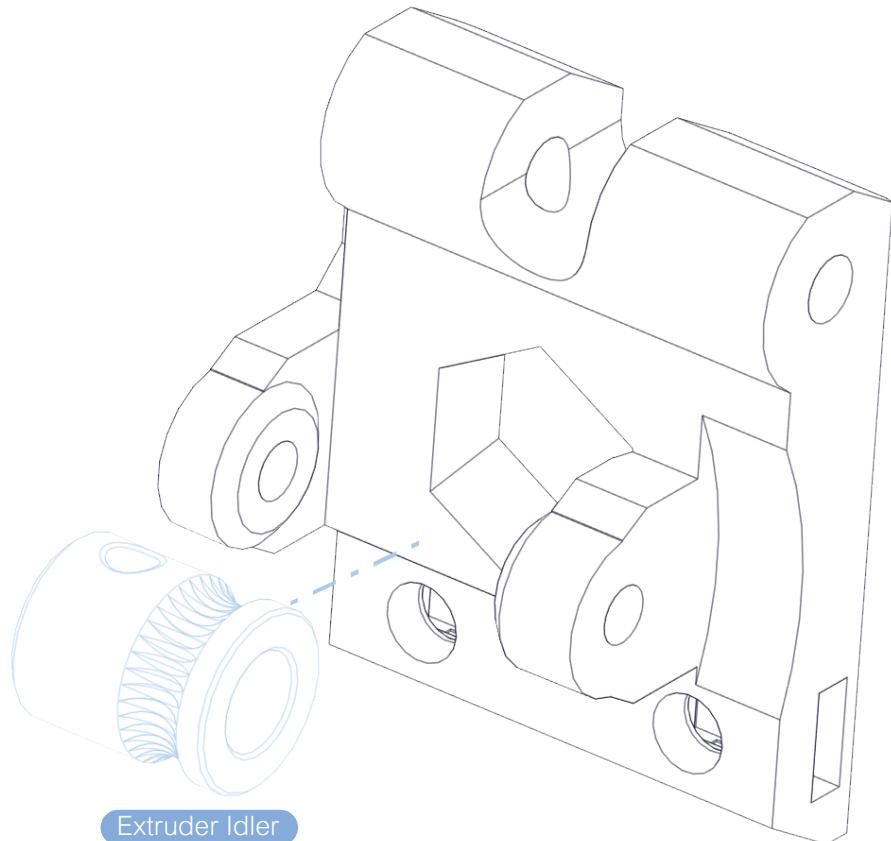
TIGHTENING THE COVER

Secure the extruder cover onto the extruder body with M3x25 SHCS and M3 Hex nut from the front and behind respectively as shown



INSERTING EXTRUDER PULLEY

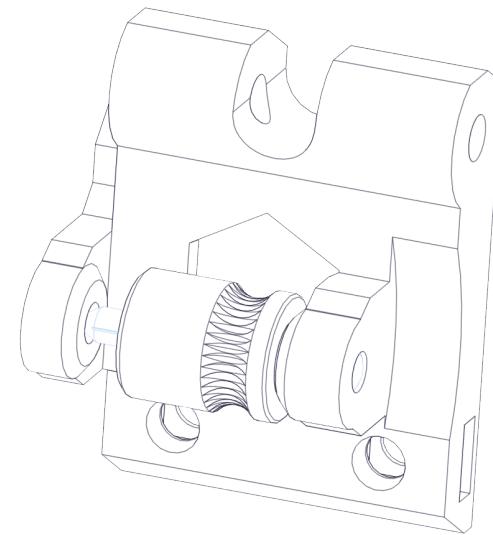
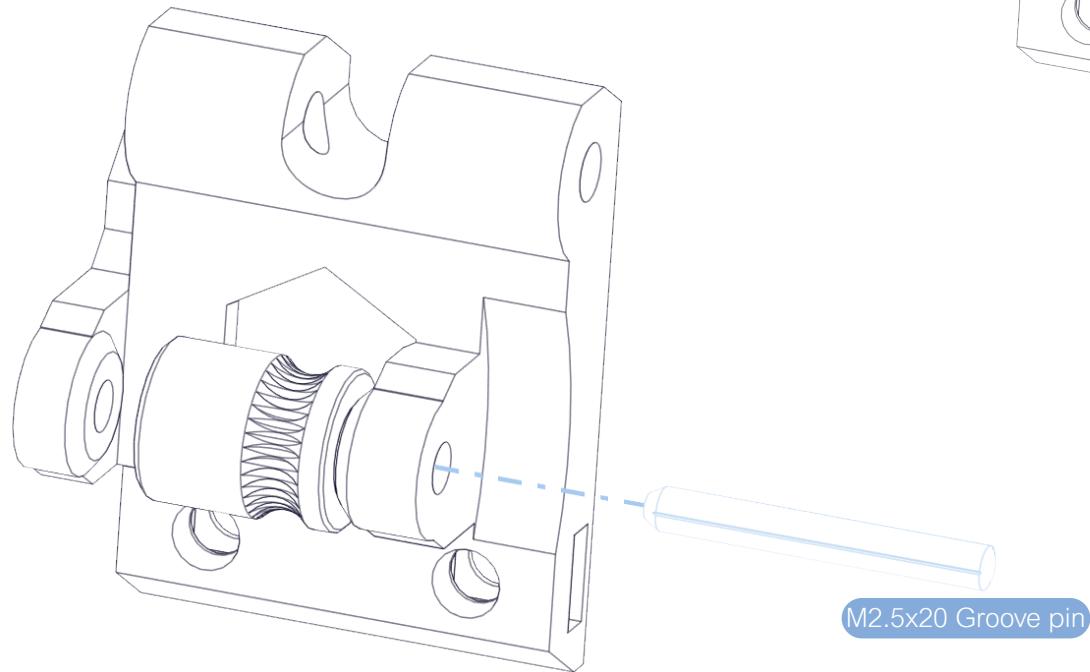
Take the extruder pulley and align it with the extruder idler as shown in the image



PREPARING EXTRUDER

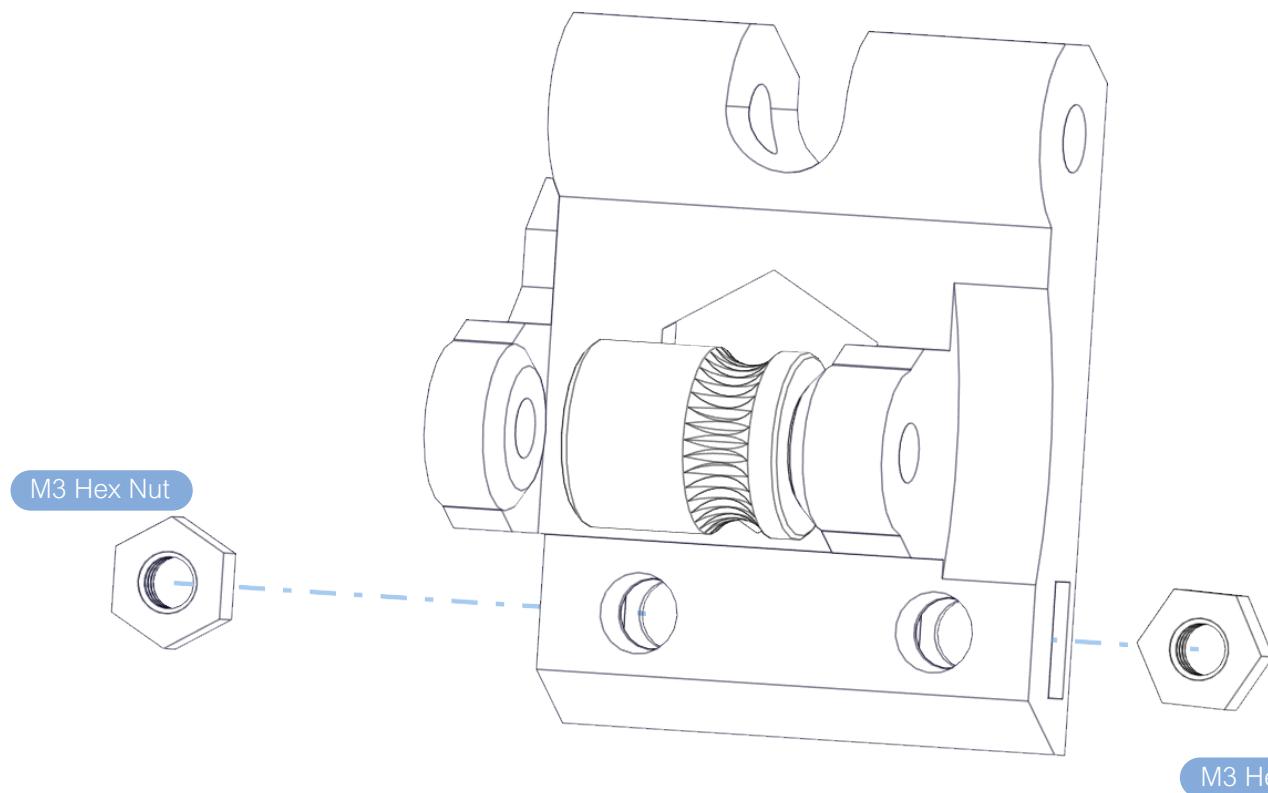
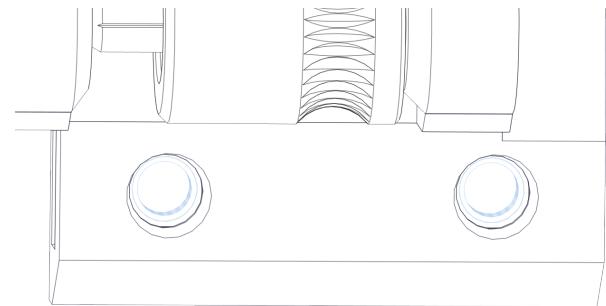
INSERTING GROOVE PIN

Secure the extruder pulley onto the extruder idler by inserting M2.5x20 Groove Pin



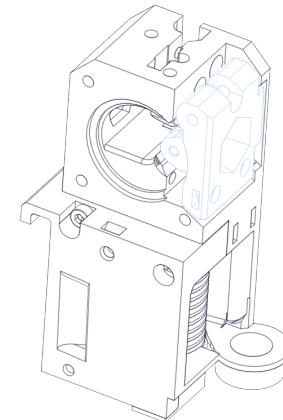
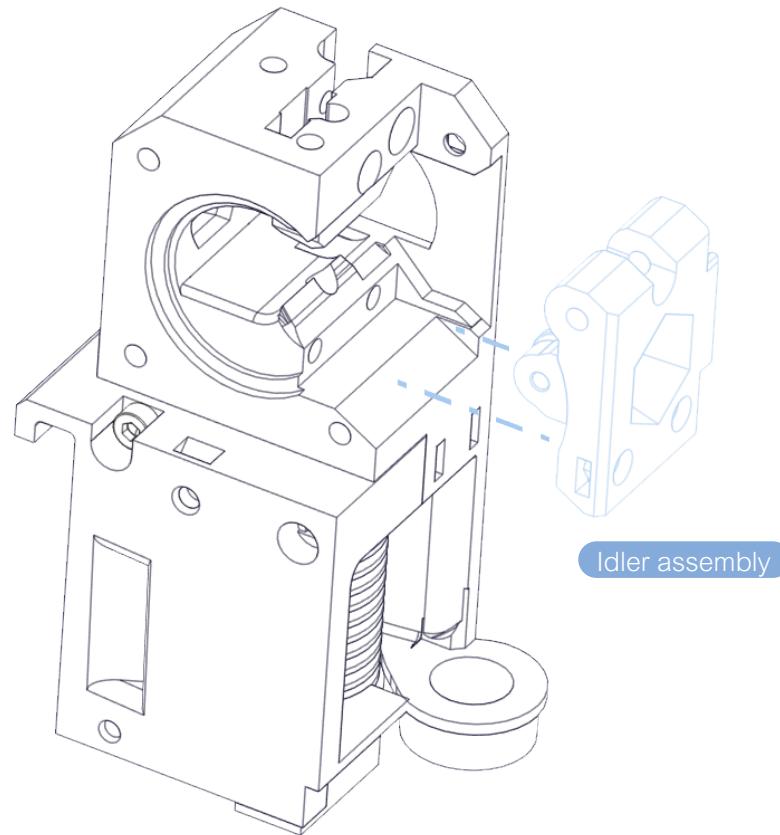
INSERTING HEX NUTS

Insert the two M3 Hex nuts into the pockets found on the sides of the extruder idler as shown in the figure



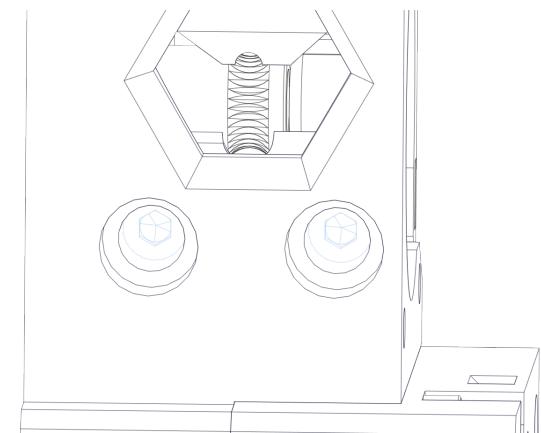
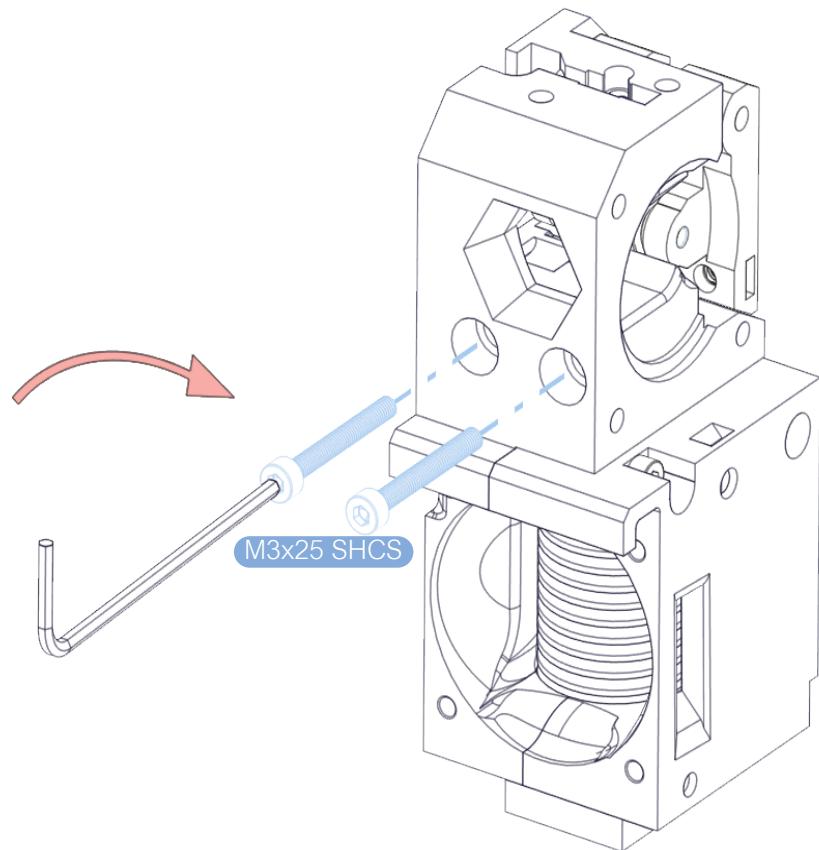
ATTACHING THE IDLER ASSEMBLY

Attach the extruder idler assembly to the previously assembled extruder body as shown in the figure.



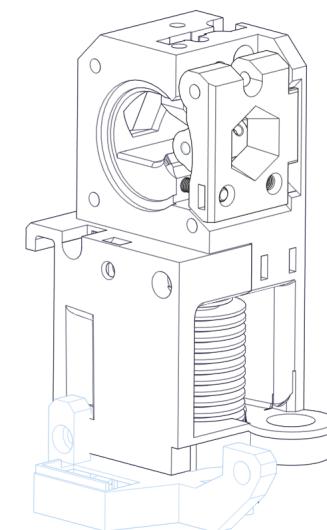
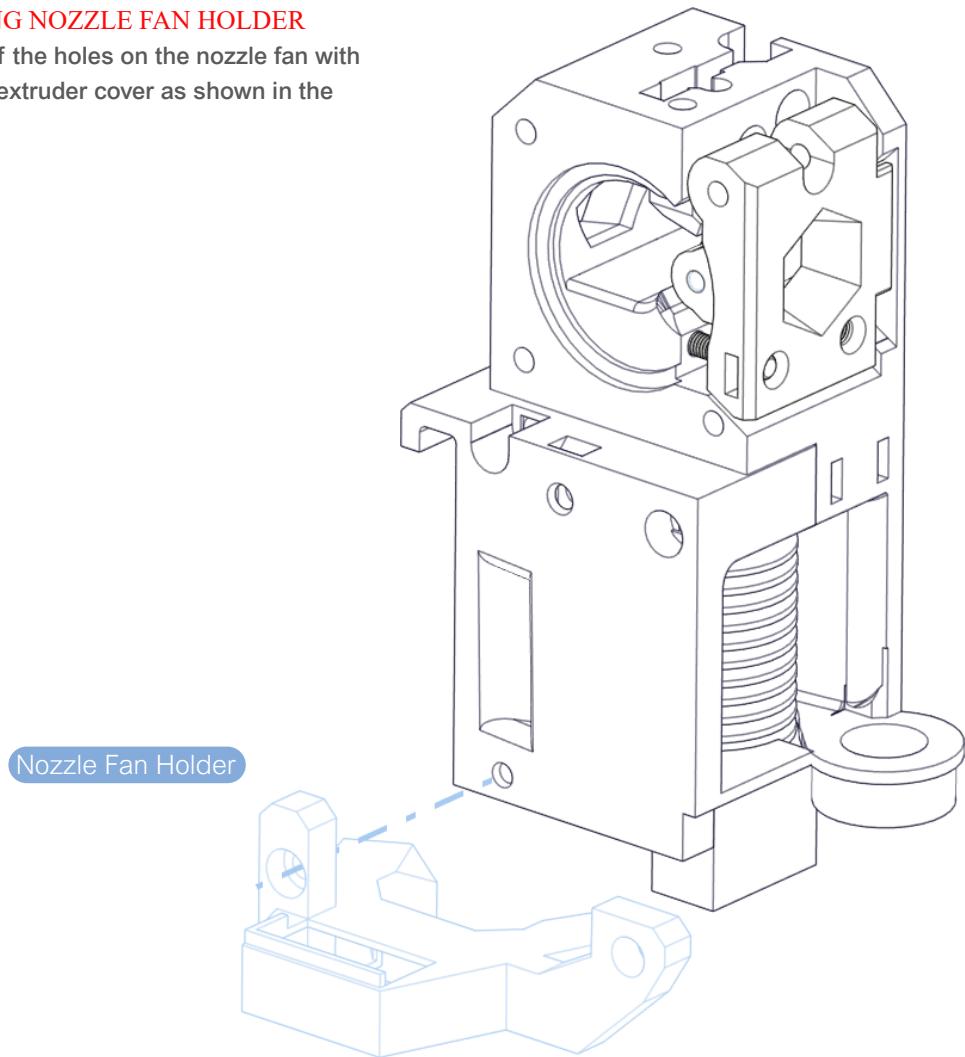
ATTACHING THE IDLER ASSEMBLY

By using two M3x25 SHCS, secure the idler assembly onto the extruder body as shown in the figure



ATTACHING NOZZLE FAN HOLDER

Align one of the holes on the nozzle fan with that on the extruder cover as shown in the figure.

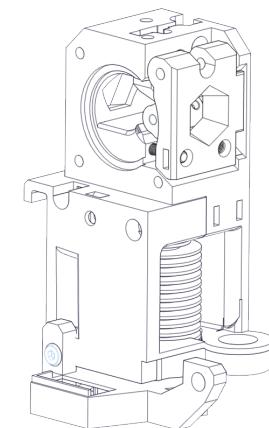
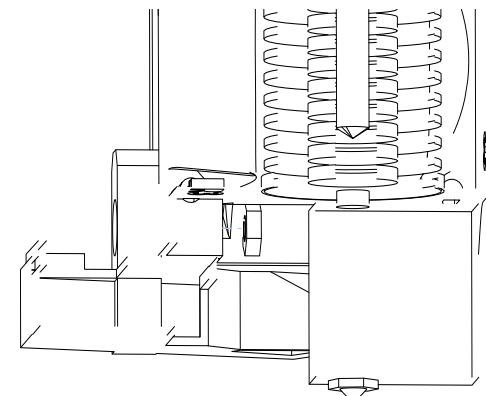
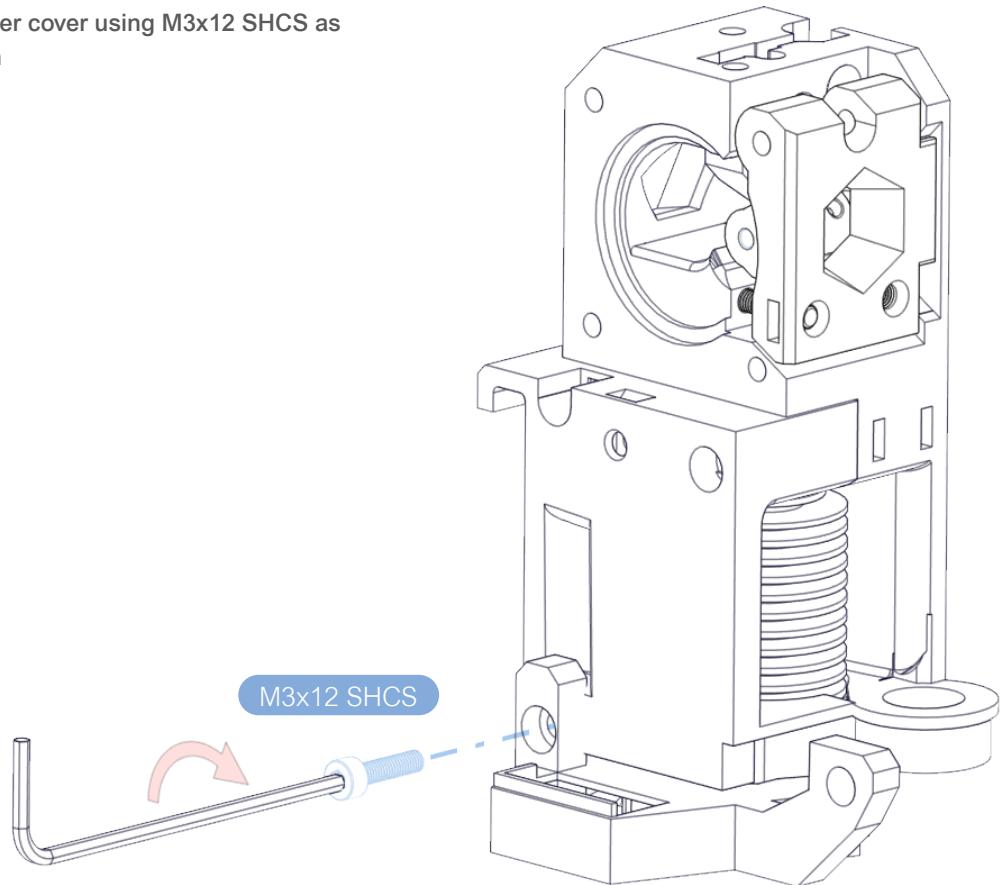


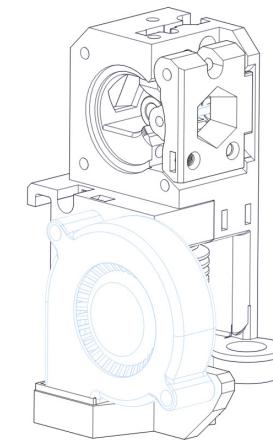
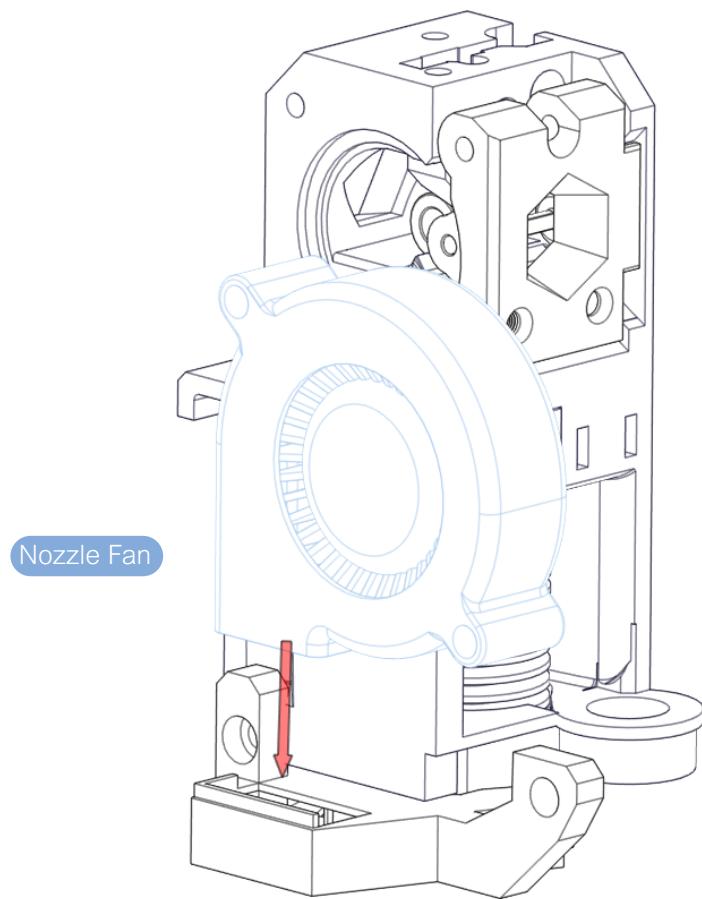
EXTRUDER ASSEMBLY

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ATTACHING NOZZLE FAN HOLDER

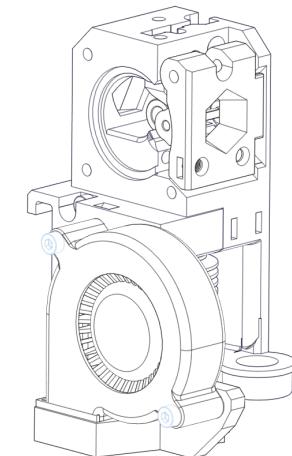
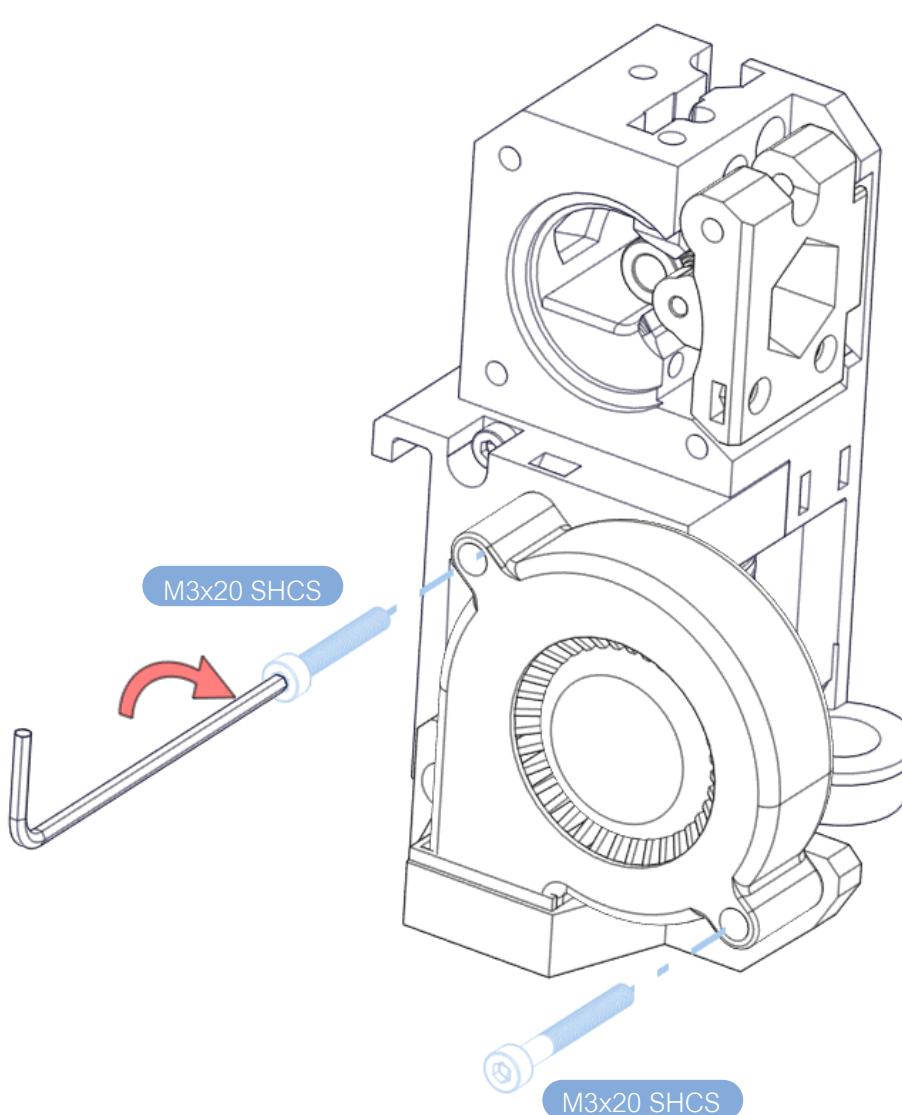
Secure the nozzle fan holder onto the extruder cover using M3x12 SHCS as shown





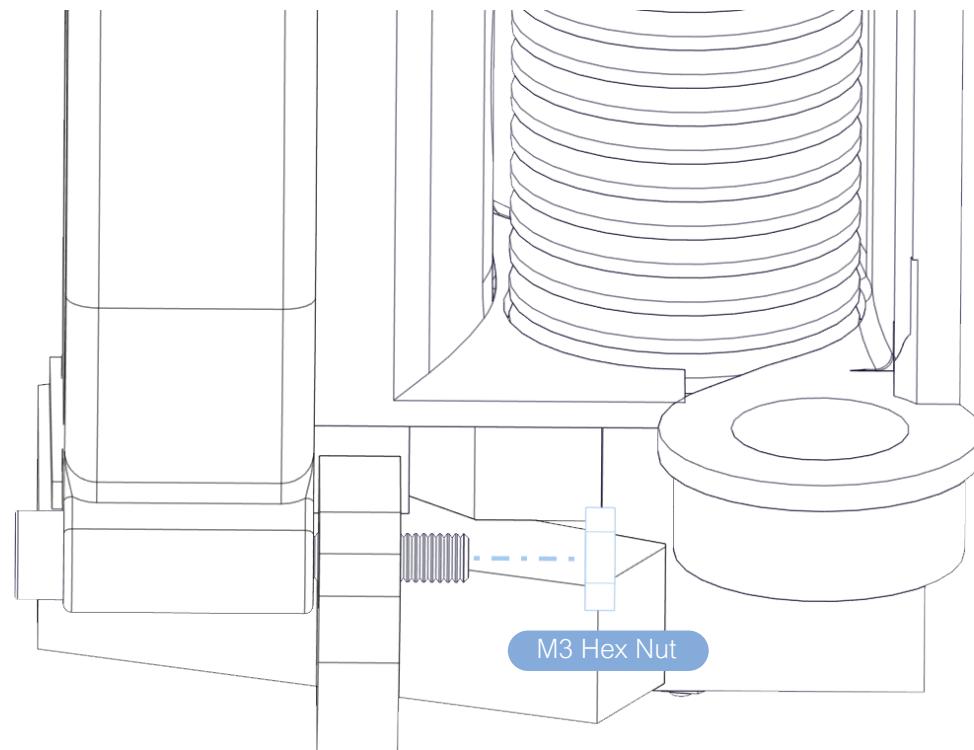
ATTACHING NOZZLE FAN

Align the nozzle fan with the fan holder and the extruder cover, place the fan into position as shown.



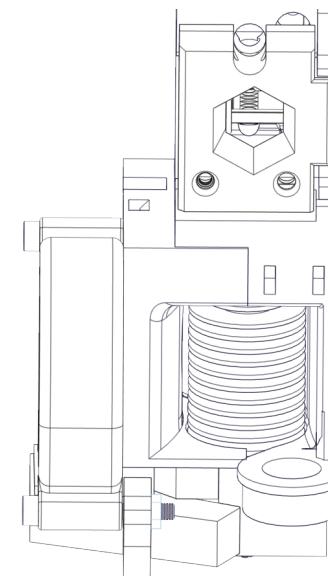
ATTACHING NOZZLE FAN

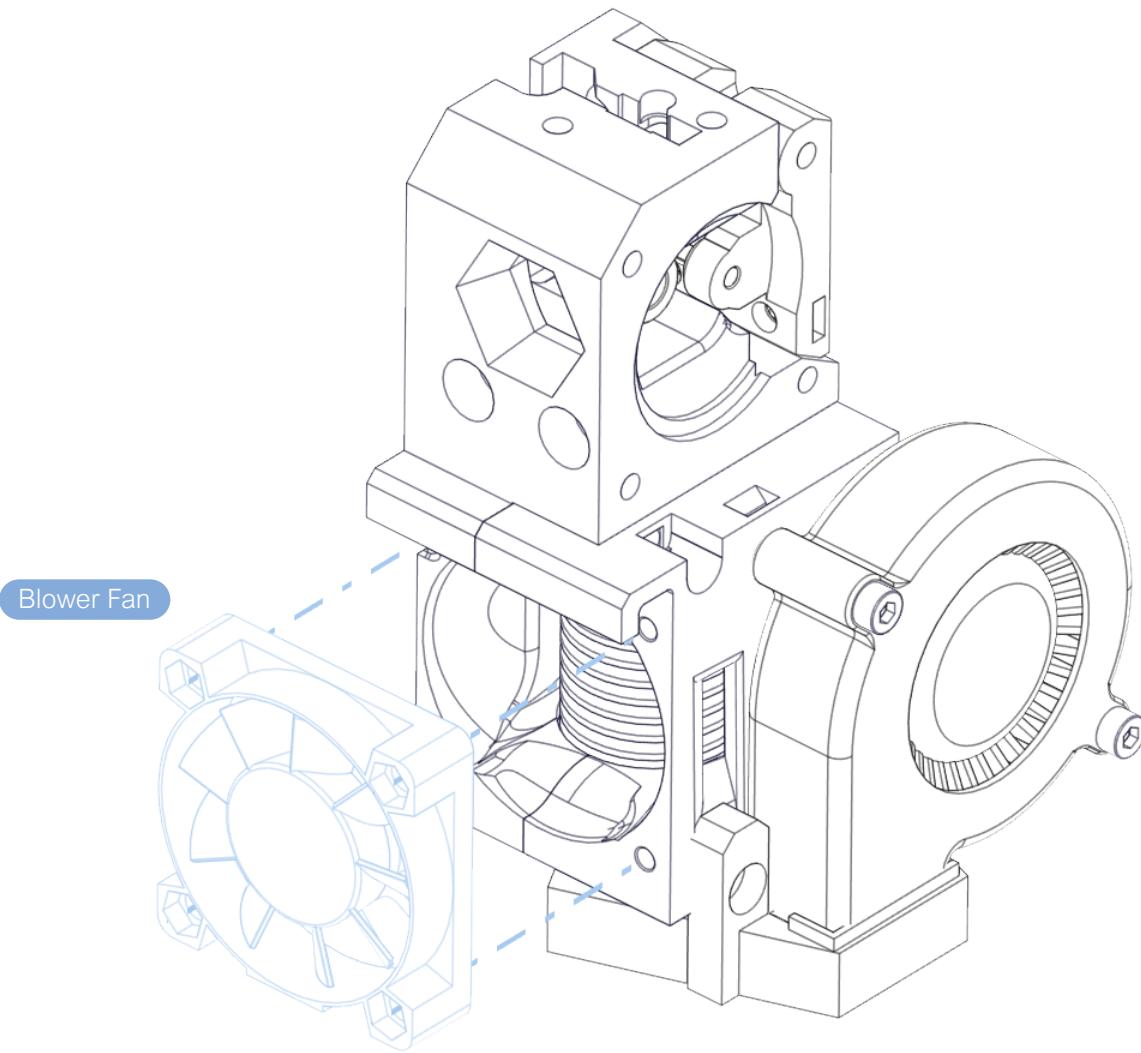
Secure the nozzle fan onto the fan holder using M3x20 SHCS as shown



ATTACHING NOZZLE FAN

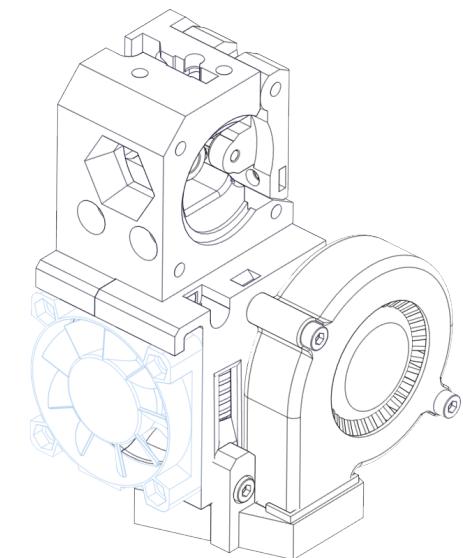
Insert the M3 Hex nut onto the M3x20 SHCS end and tighten to secure the nozzle fan as shown.





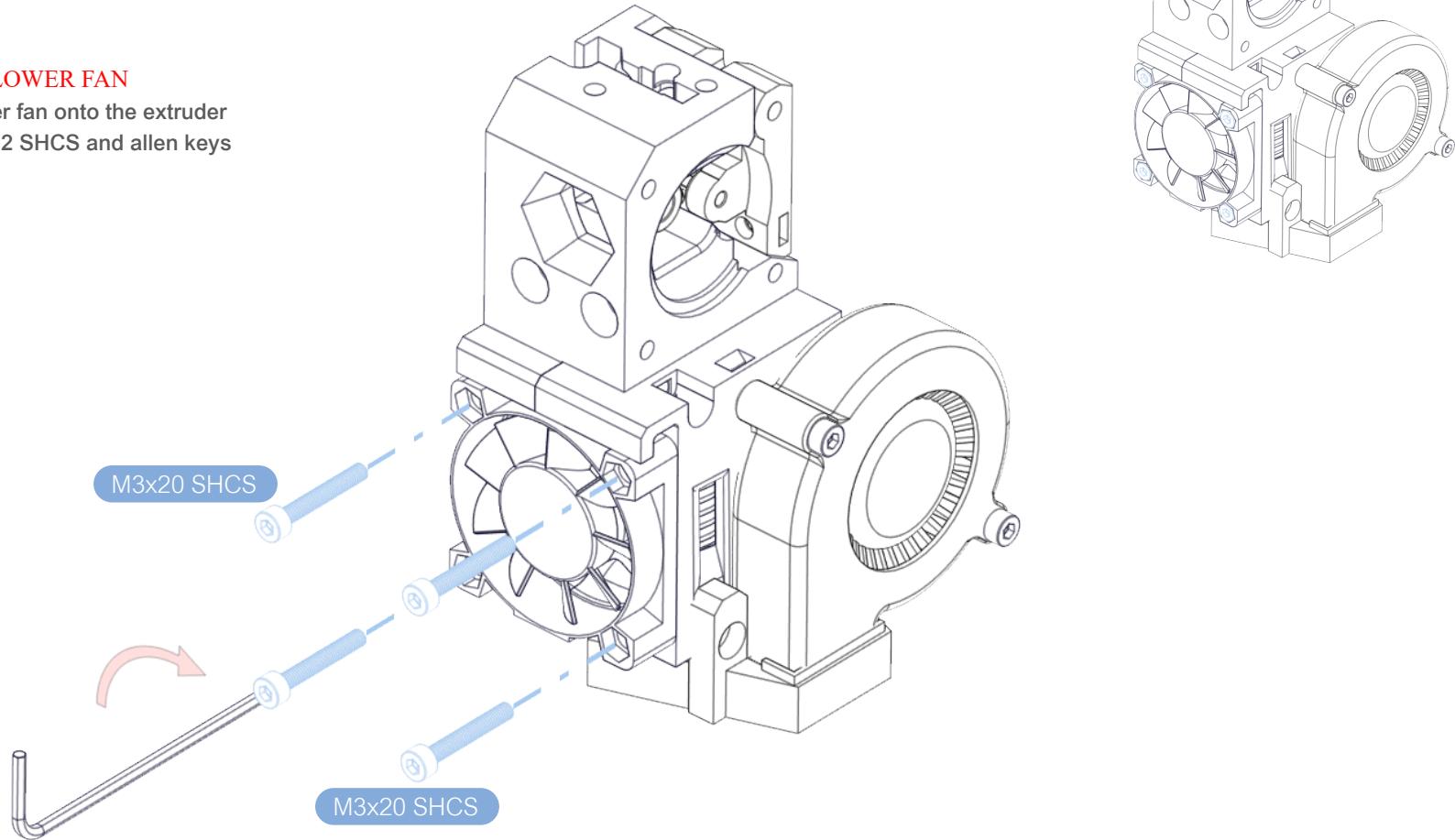
ATTACHING BLOWER FAN

Align the blower fan with the extruder body and place the same in position.



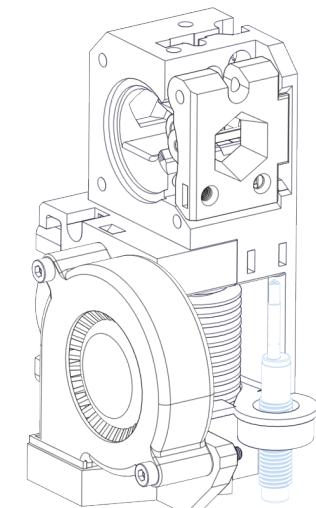
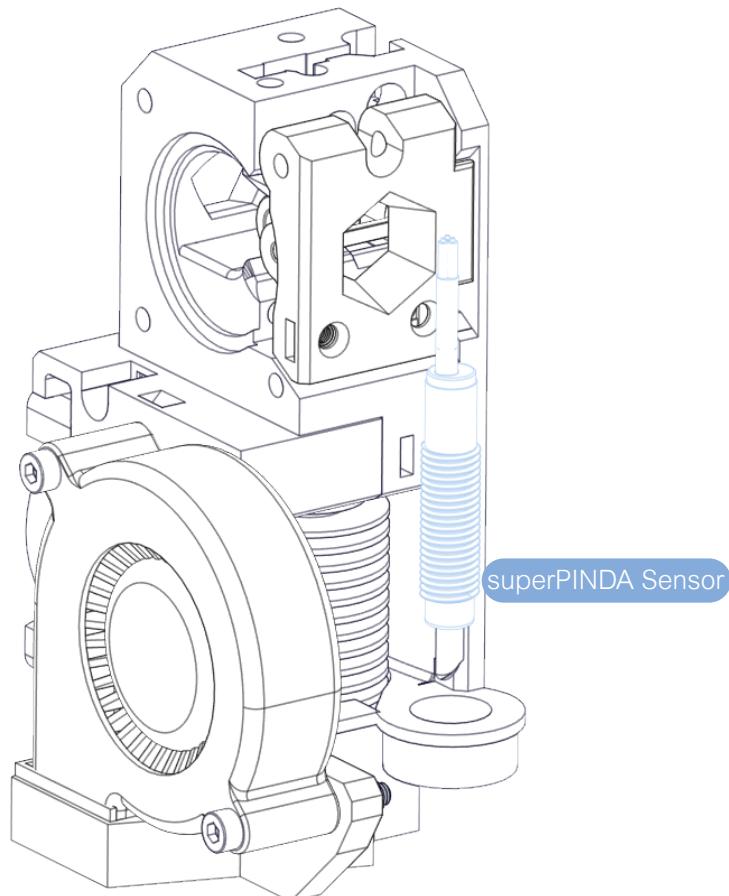
ATTACHING BLOWER FAN

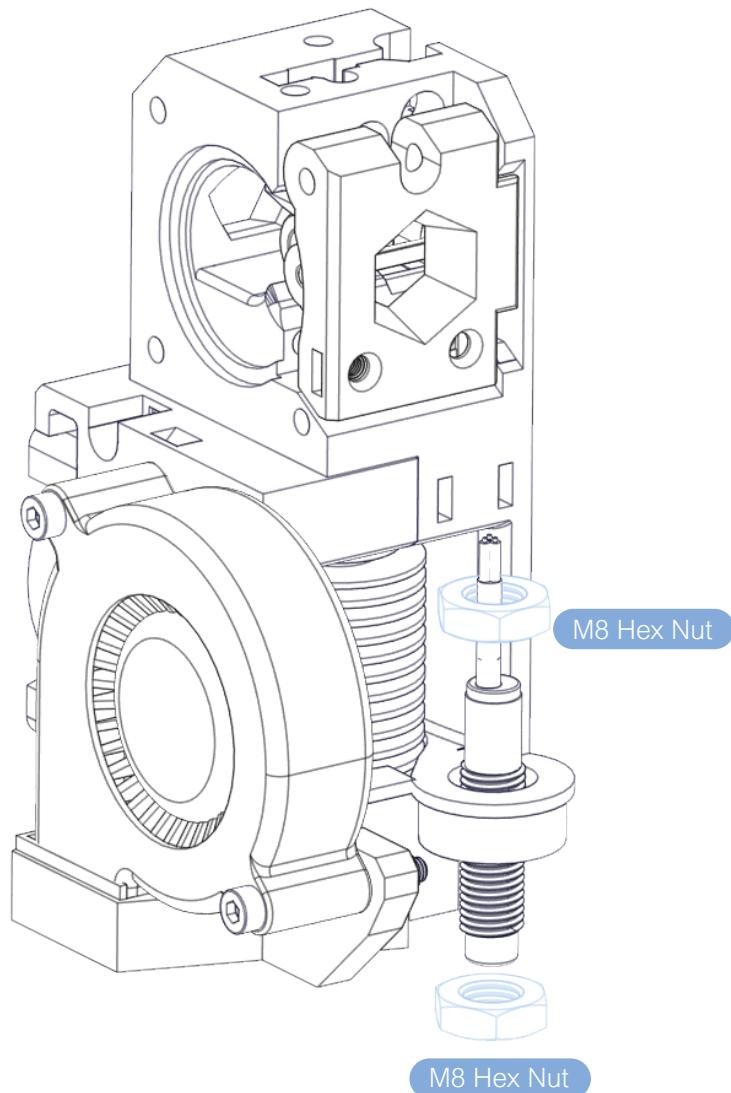
Secure the blower fan onto the extruder body using M3x12 SHCS and allen keys



ATTACHING SENSOR

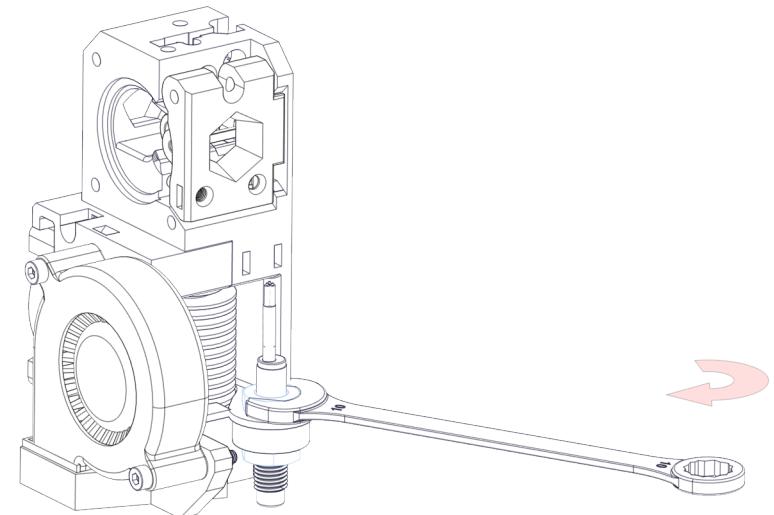
Take the SuperPINDA sensor, align it with the extruder body opening and insert it as shown in the image

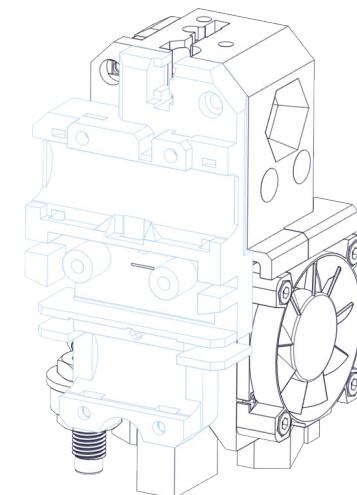
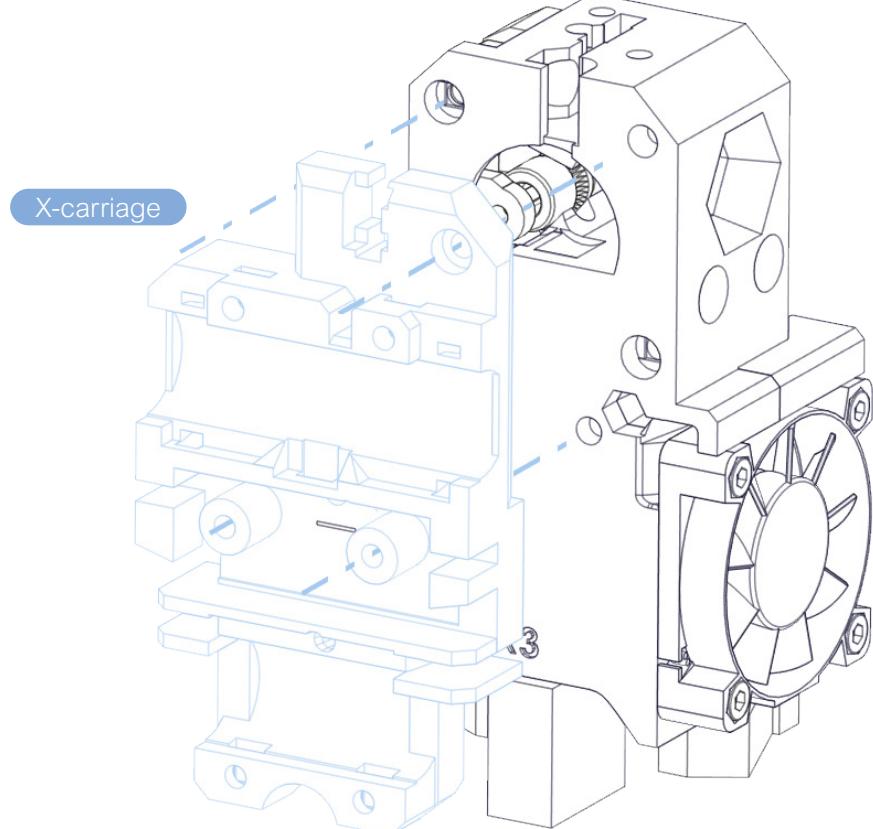




ATTACHING SENSOR

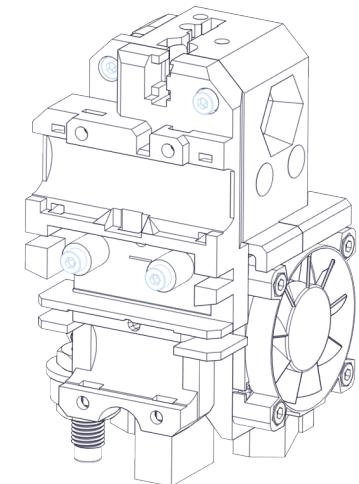
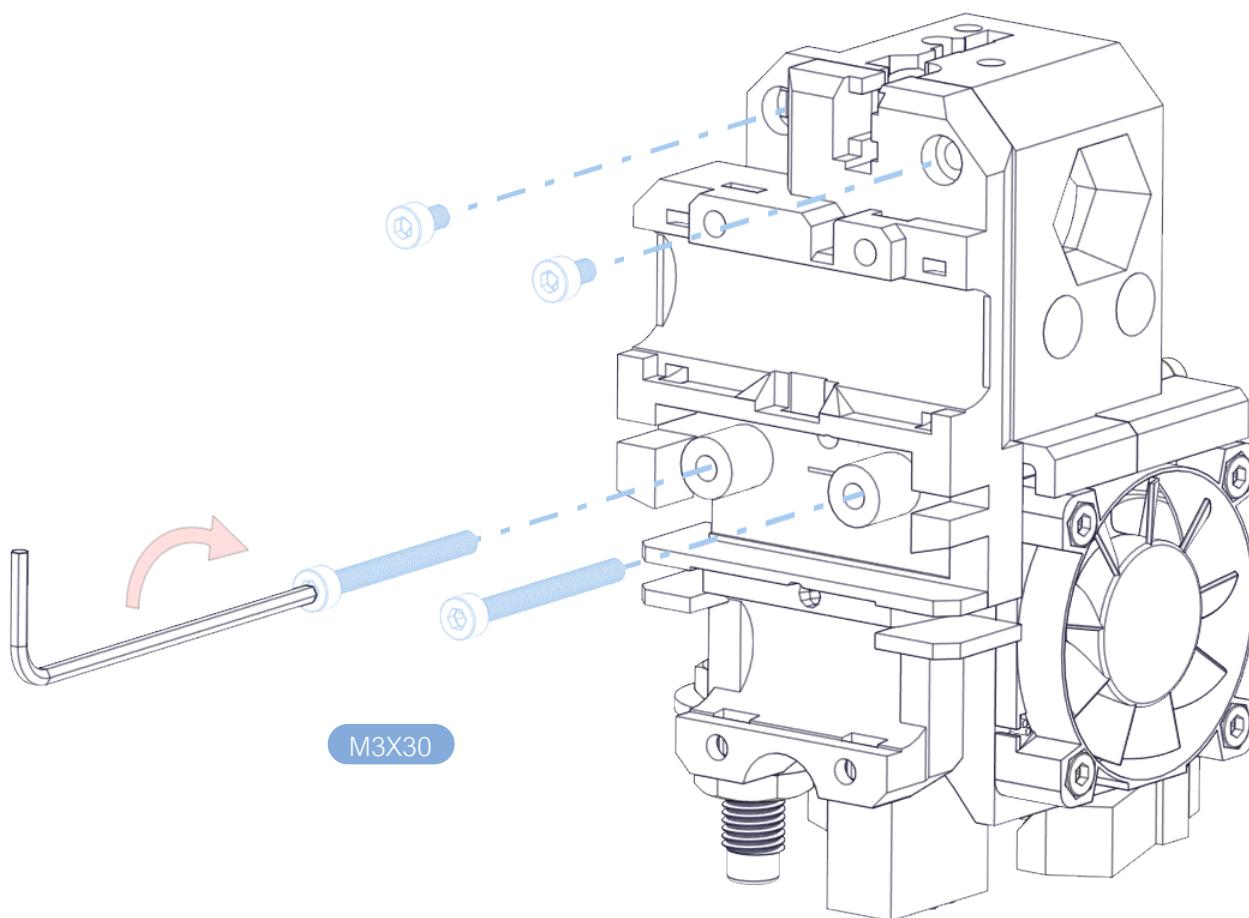
Secure the superPINDA sensor onto the extruder body using M8 Hex nuts





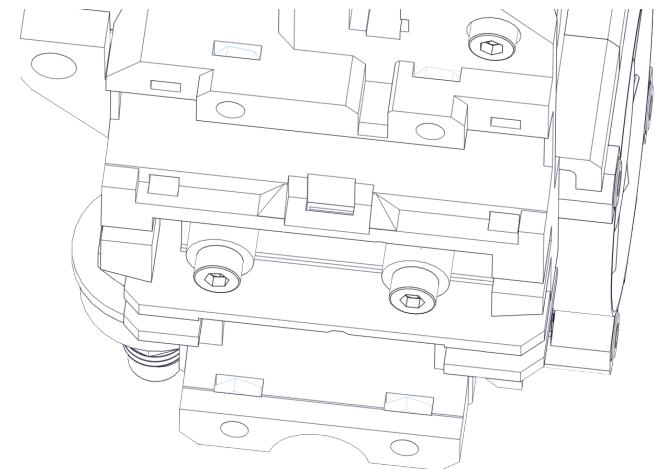
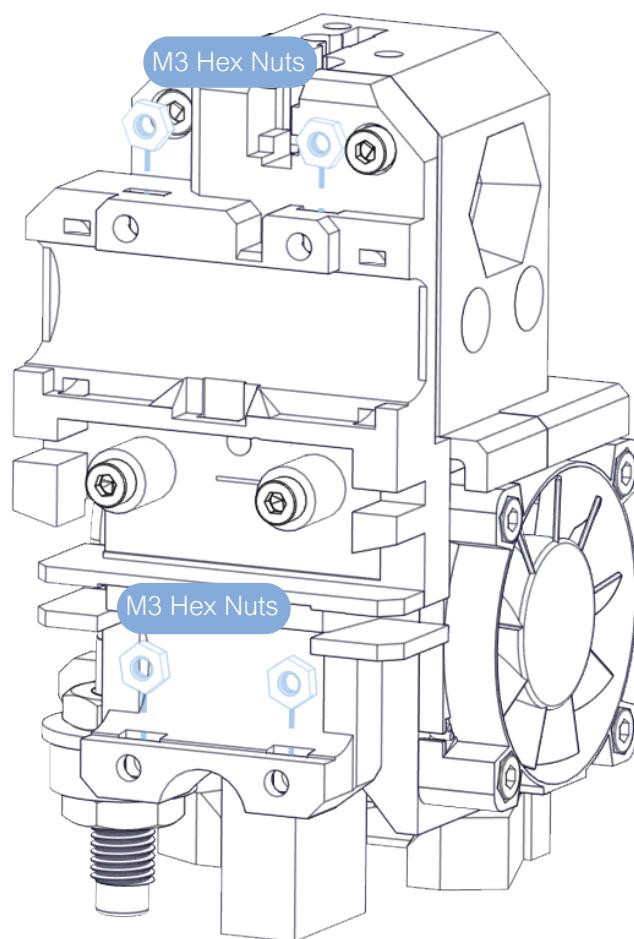
ATTACHING X-CARRIAGE

Take the X-carriage and align it with the extruder body, place it in position as shown



ATTACHING X-CARRIAGE

Secure the x-carriage onto the extruder body using M3x30 SHCS

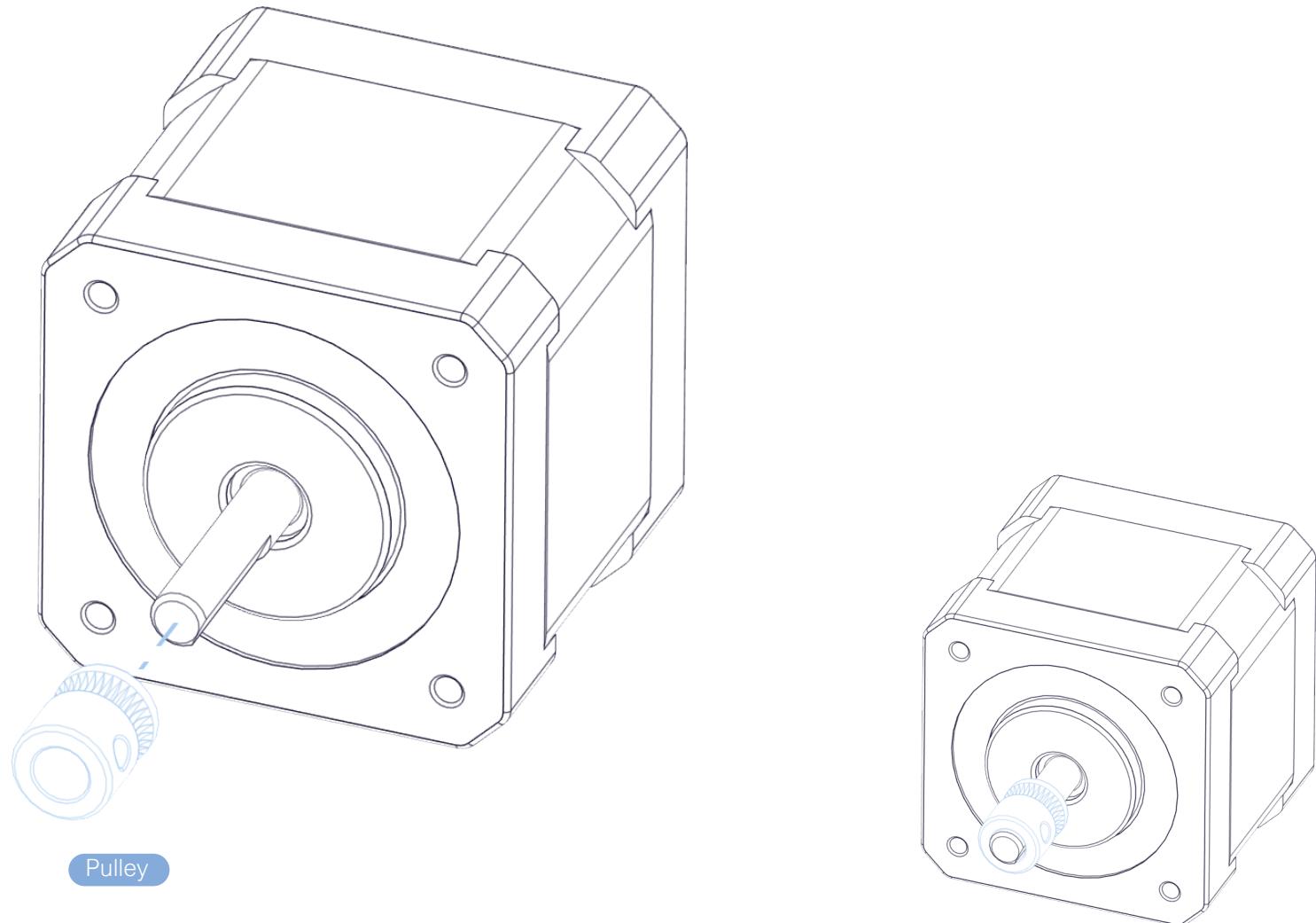


INSERTING HEX NUTS

Insert four M3 Hex nuts into the x-carriage pockets. Ensure they don't fall off in the course of the assembly as they will be needed for another stage.

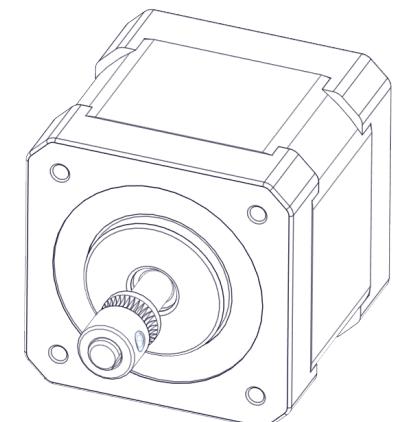
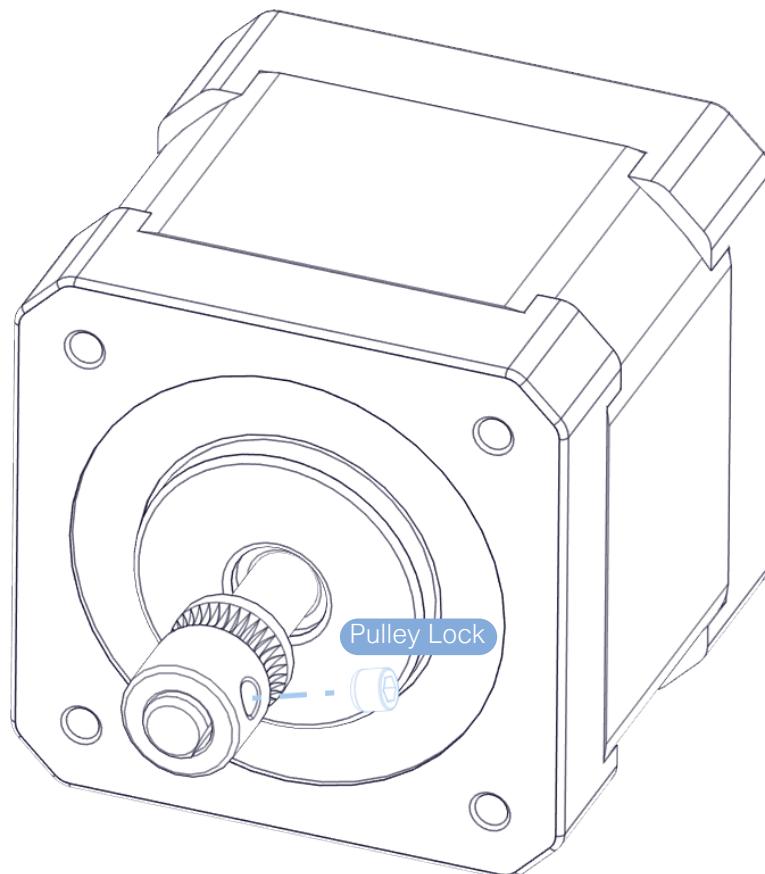
PREPARING THE MOTOR

Align the extruder bearing with the motor shaft and place it in position on the shaft.



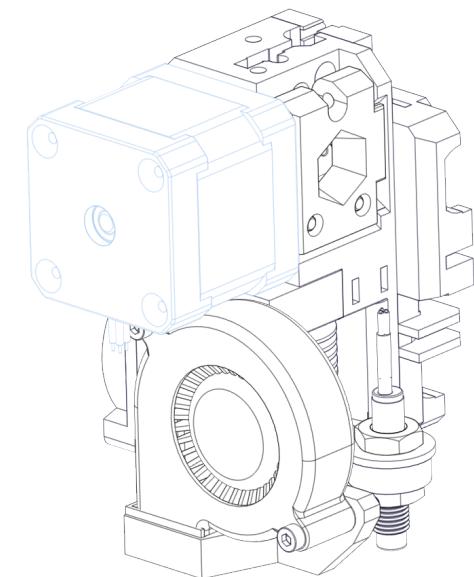
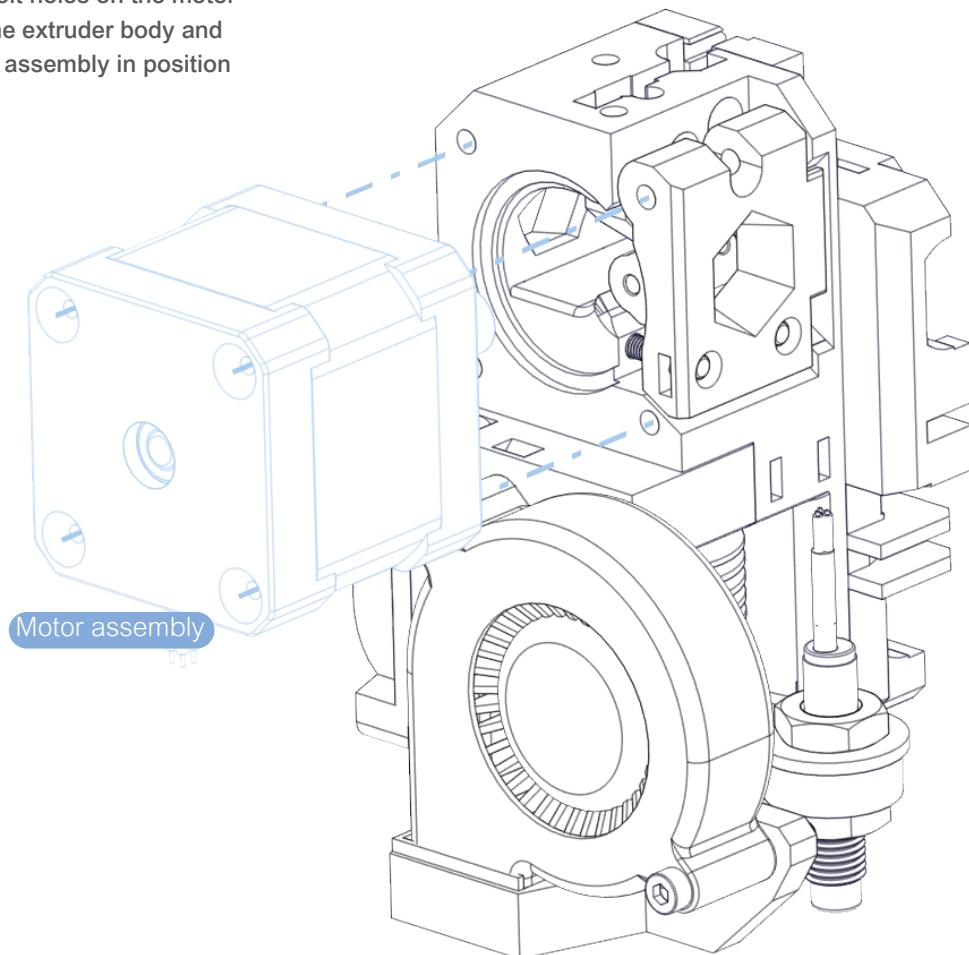
PREPARING THE MOTOR

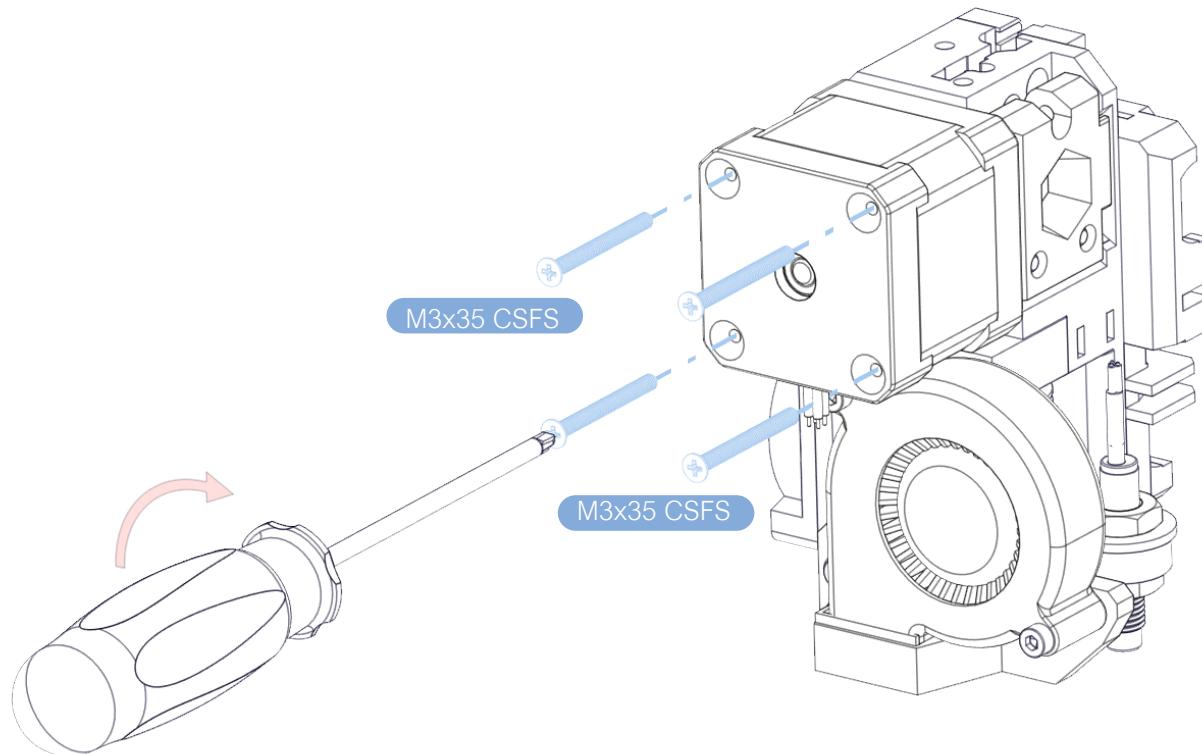
Secure the pulley onto the motor shaft by inserting a pulley lock and tightening using allen keys



ATTACHING THE MOTOR

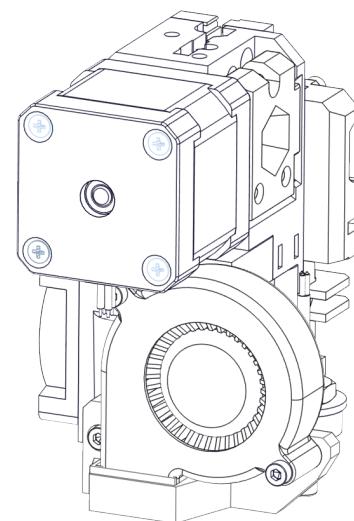
Align the four bolt holes on the motor with those on the extruder body and place the motor assembly in position





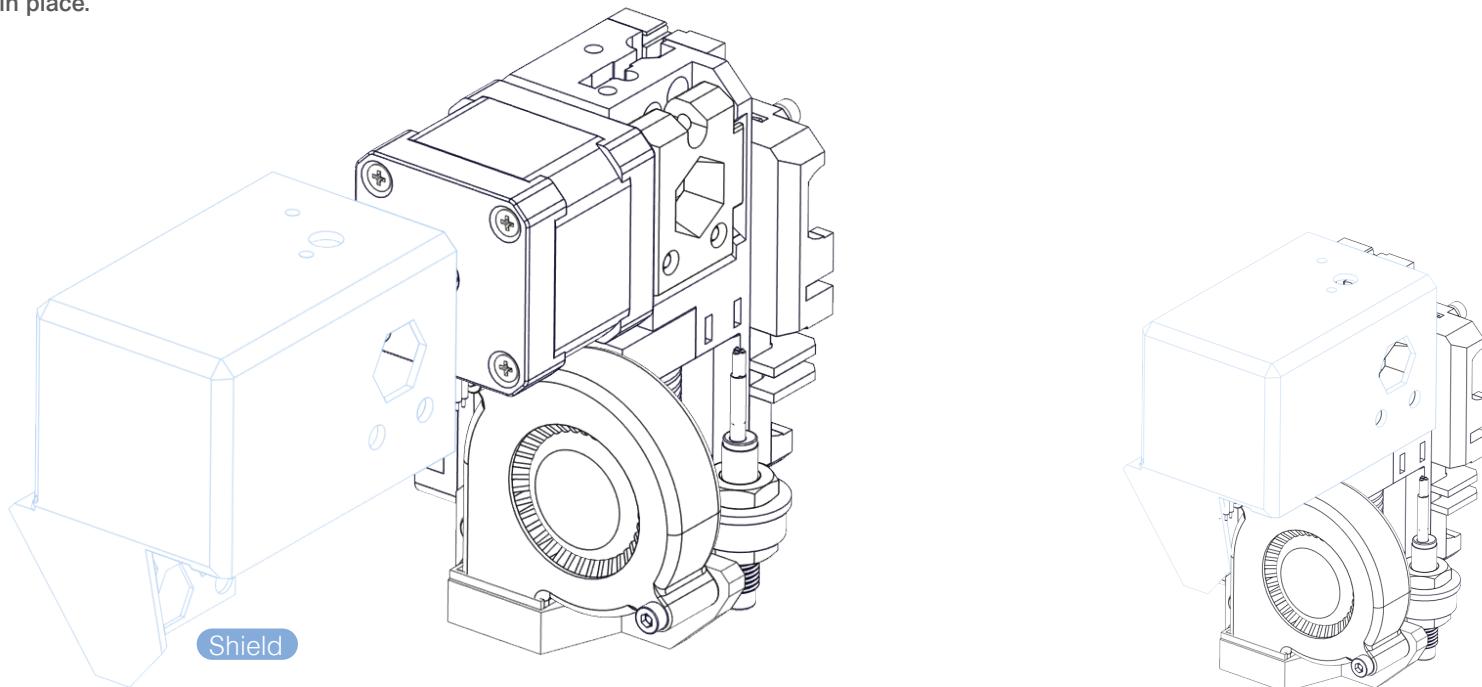
ATTACHING THE MOTOR

Secure the motor-pulley assembly onto the extruder body using M3x35 countersunk cross flat head screws



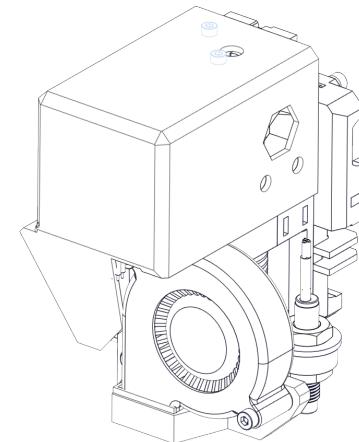
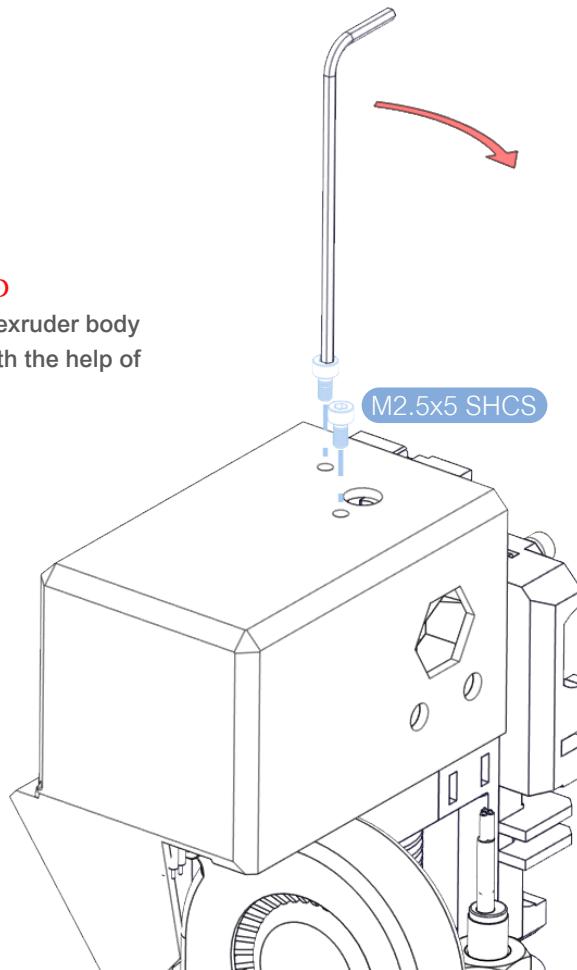
ATTACHING THE SHIELD

Align the shield with the extruder body and then position it in place.



ATTACHING THE SHIELD

Secure the shield onto the extruder body using two M2.5x5 SHCS with the help of allen keys

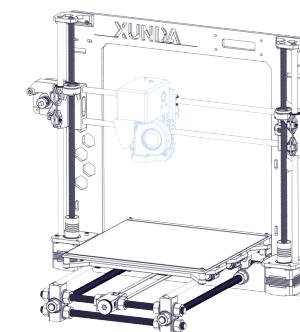
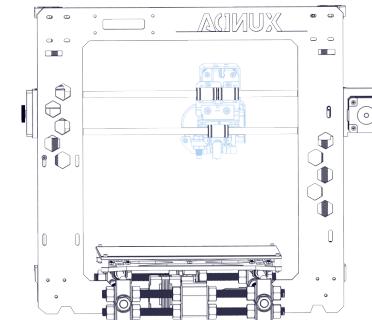
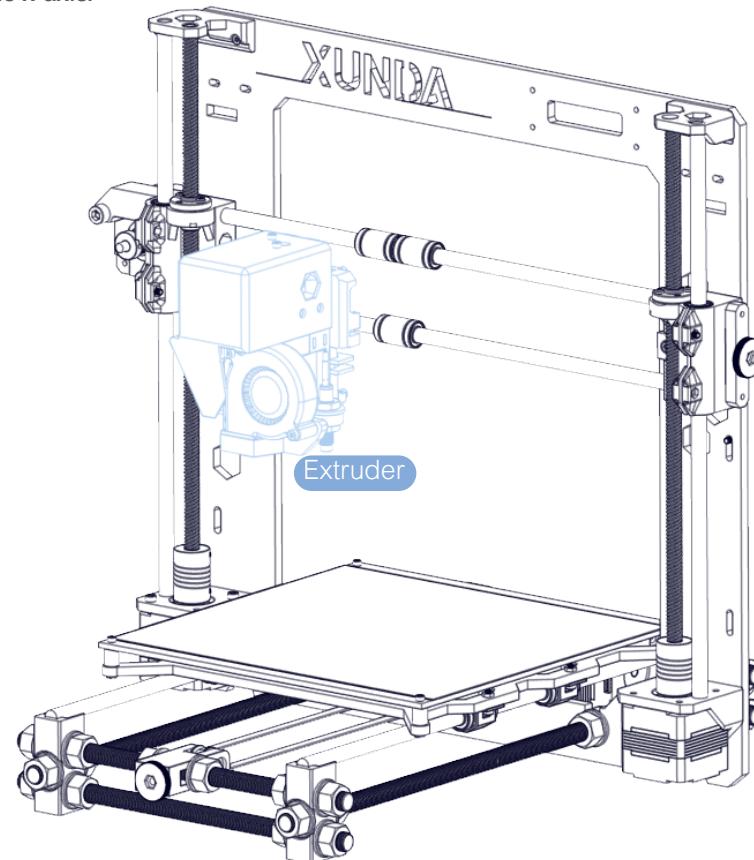


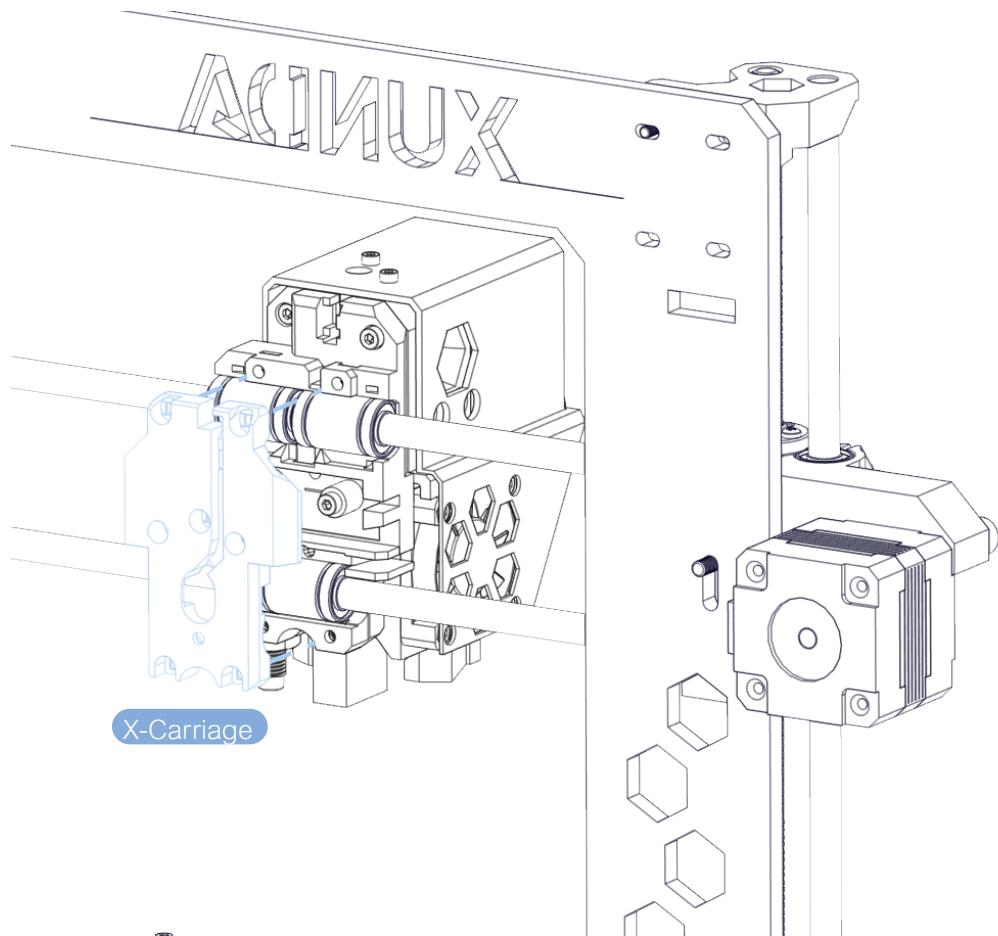
EXTRUDER ASSEMBLY

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ATTACHING EXTRUDER ASSEMBLY

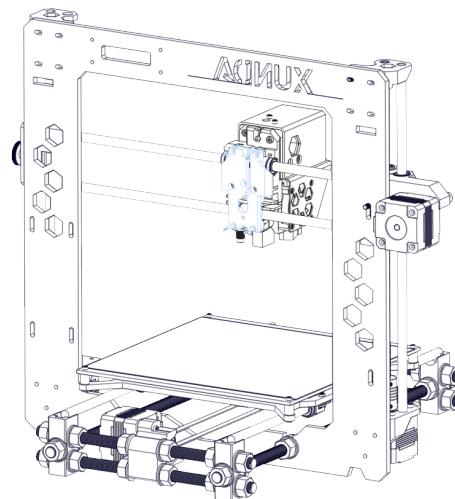
Position the extruder assembly on the linear bearings placed on the x-axis.

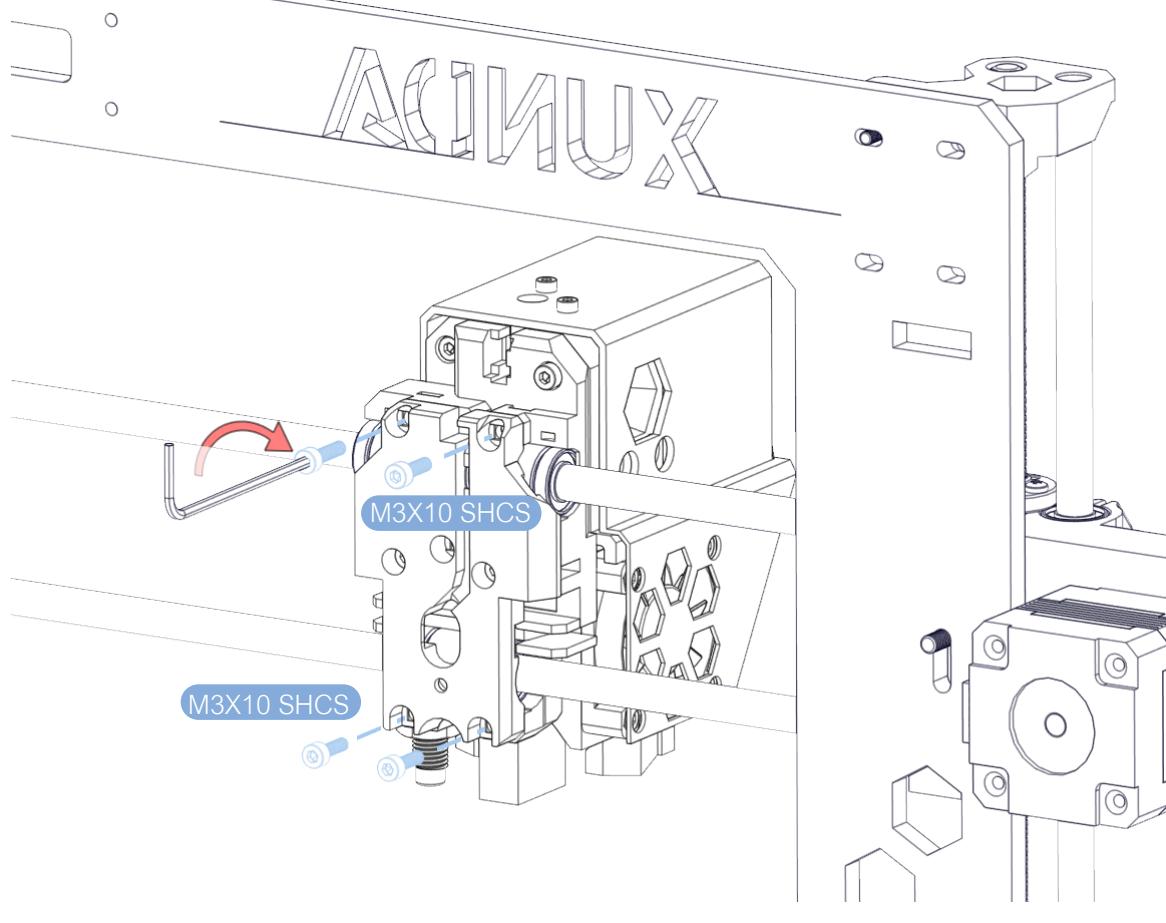




ATTACHING EXTRUDER ASSEMBLY

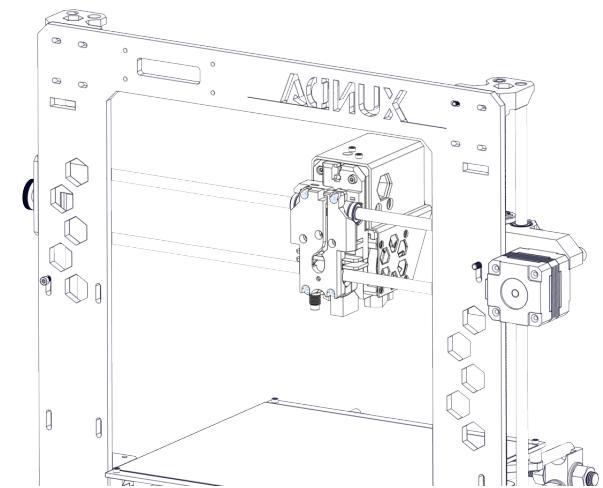
Align the back x-carriage with the extruder assembly from the other side of the linear bearings

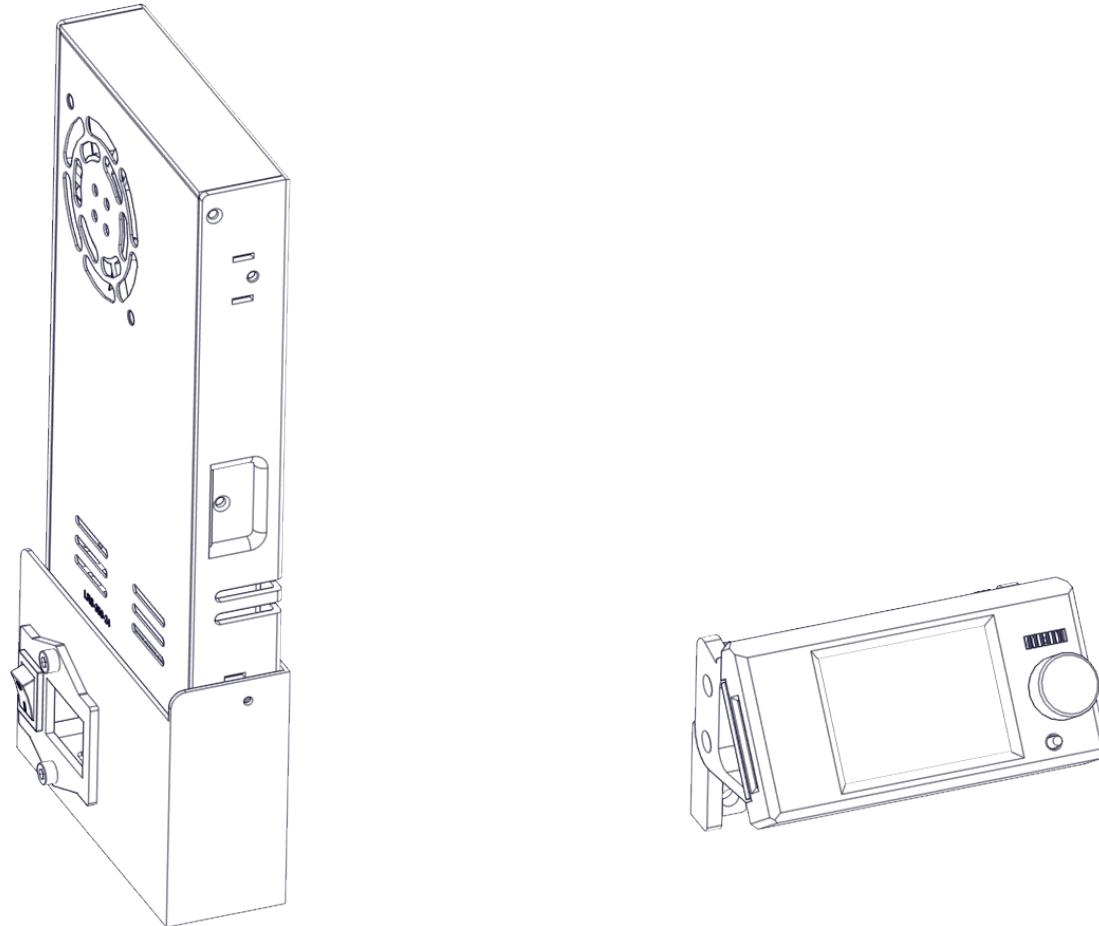




ATTACHING EXTRUDER ASSEMBLY

Secure the extruder assembly onto the x-axis by inserting M3x10 SHCS through the back x-carriage and tighten using allen keys

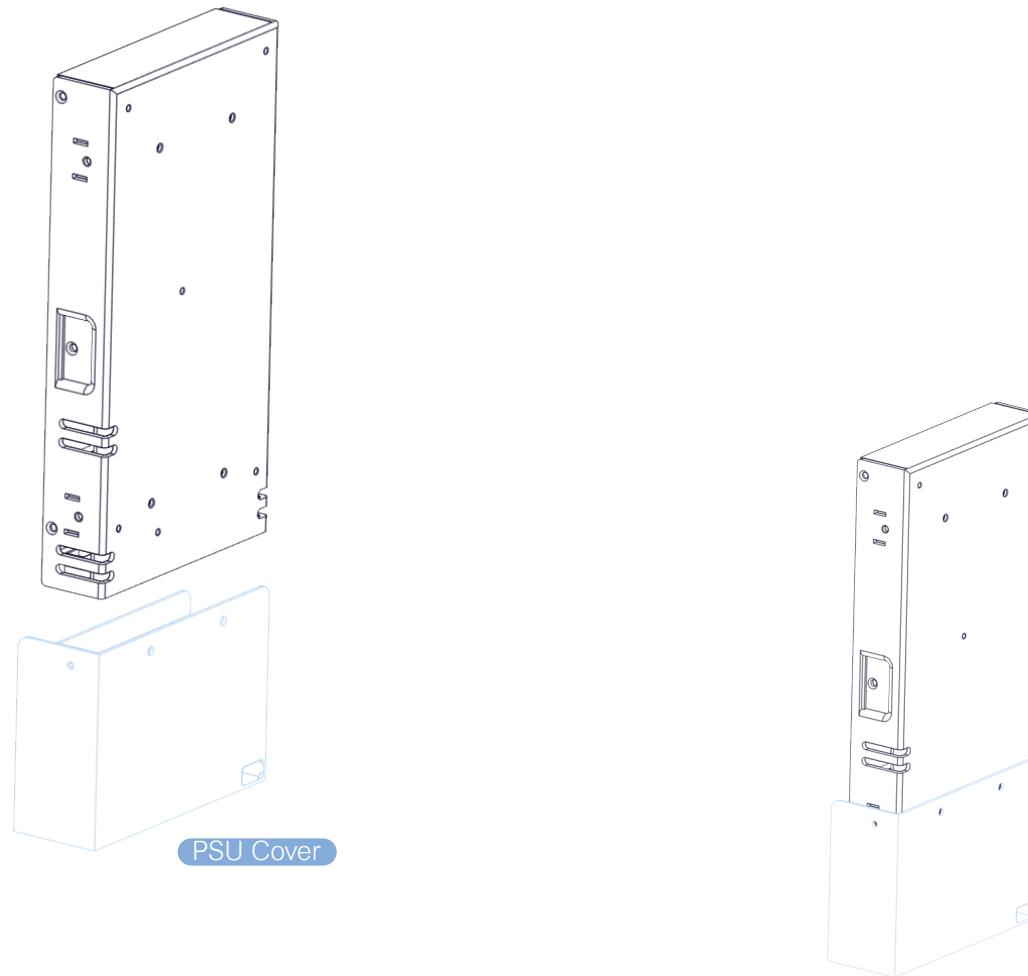




PREPARING PSU

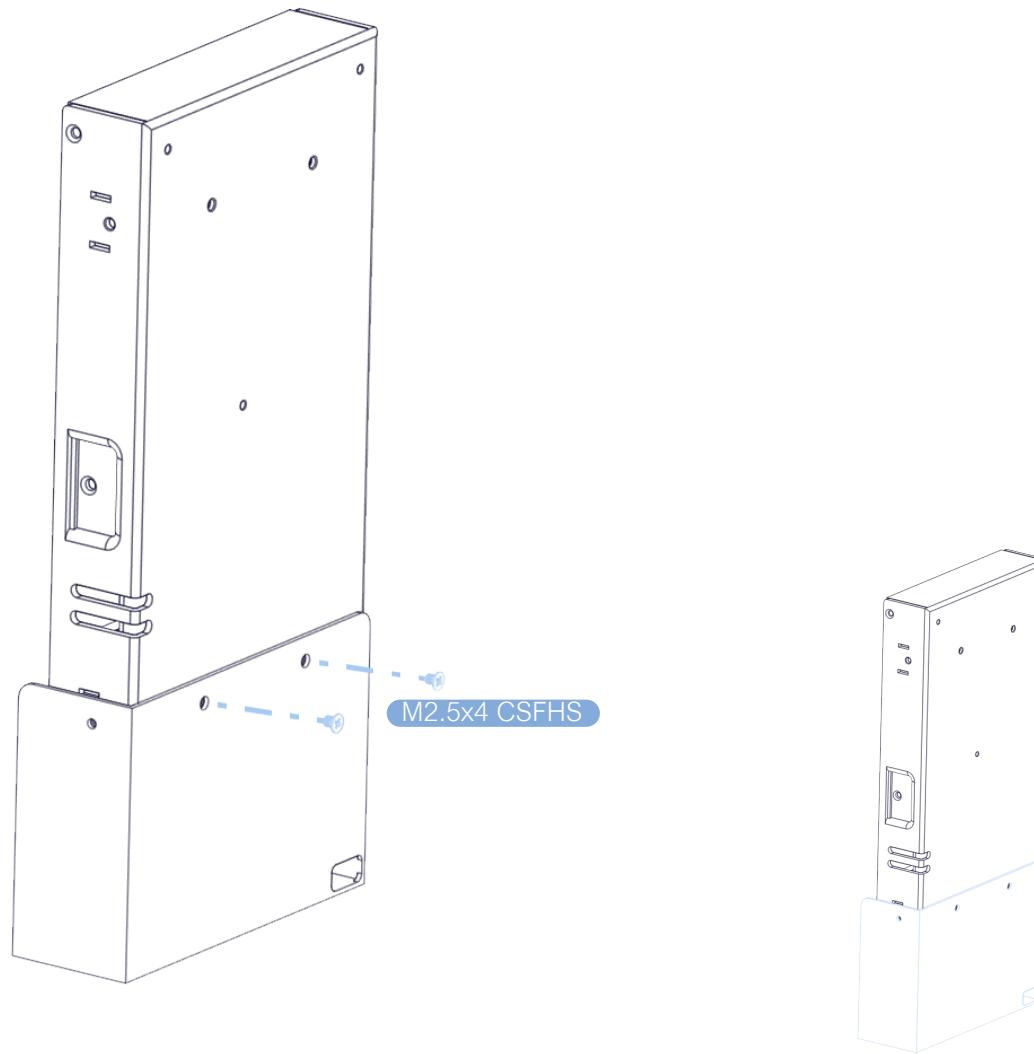
MOUNTING PSU COVER

Align the cover with the PSU and attach it into the mounting area



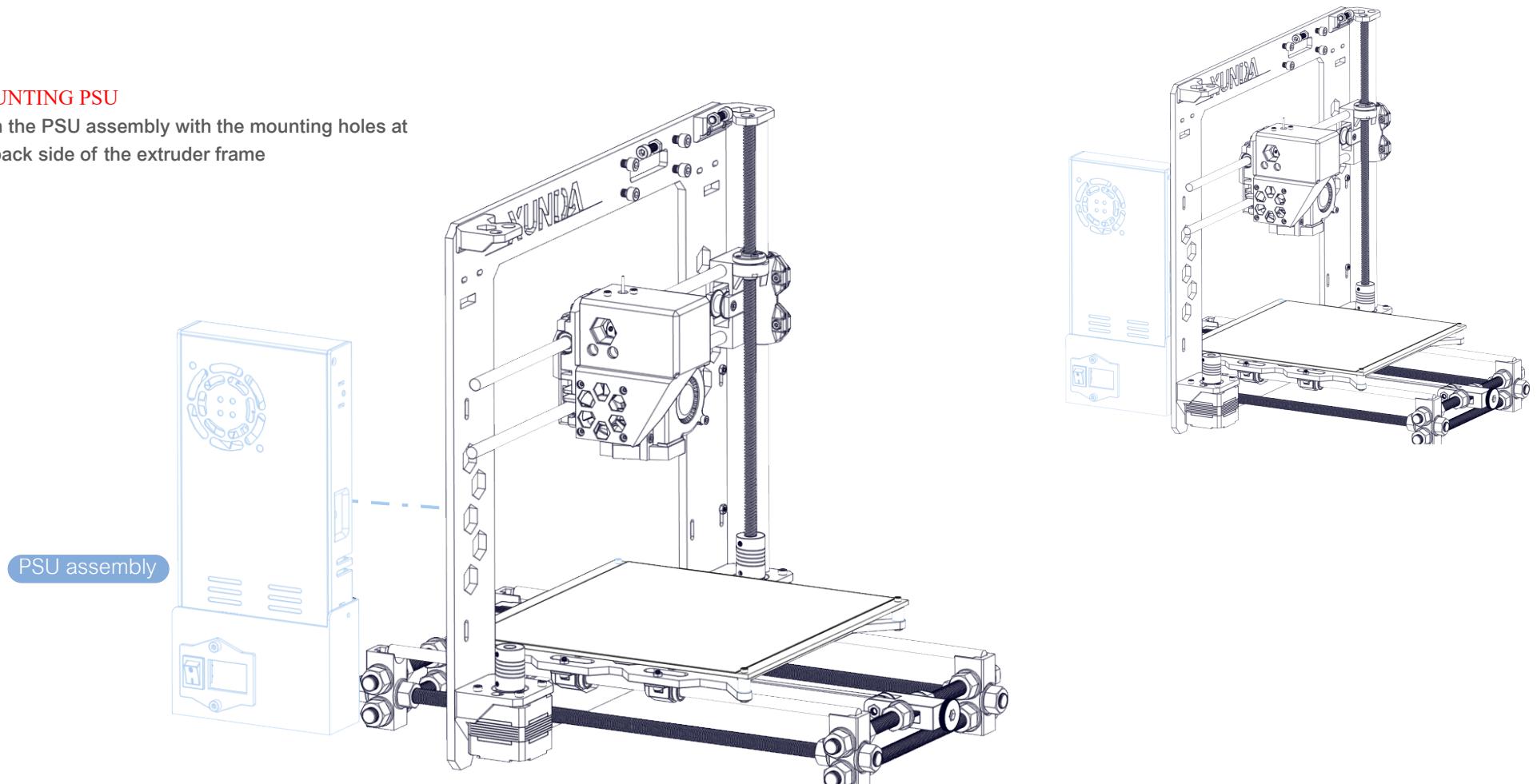
MOUNTING PSU COVER

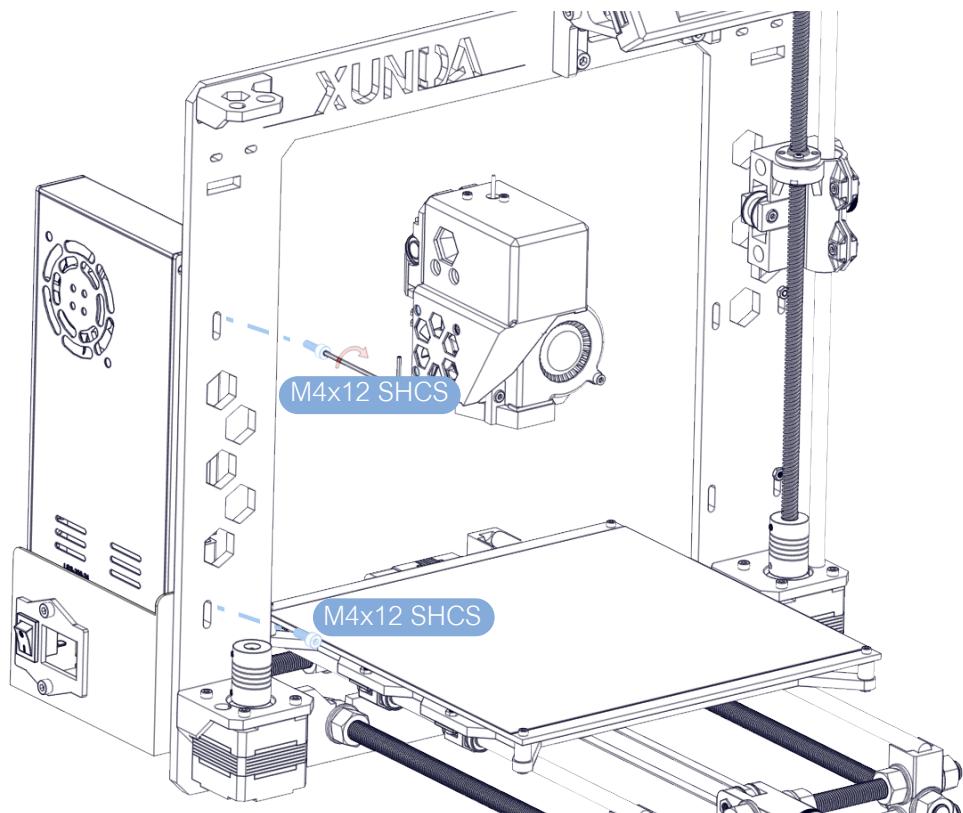
Secure the cover onto the PSU using M2.5x4 countersunk flat head cross screws



MOUNTING PSU

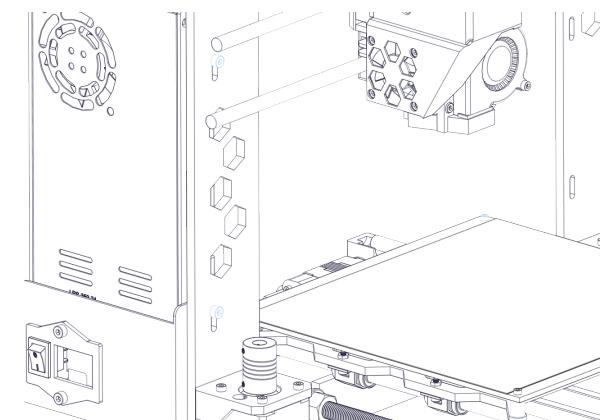
Align the PSU assembly with the mounting holes at the back side of the extruder frame



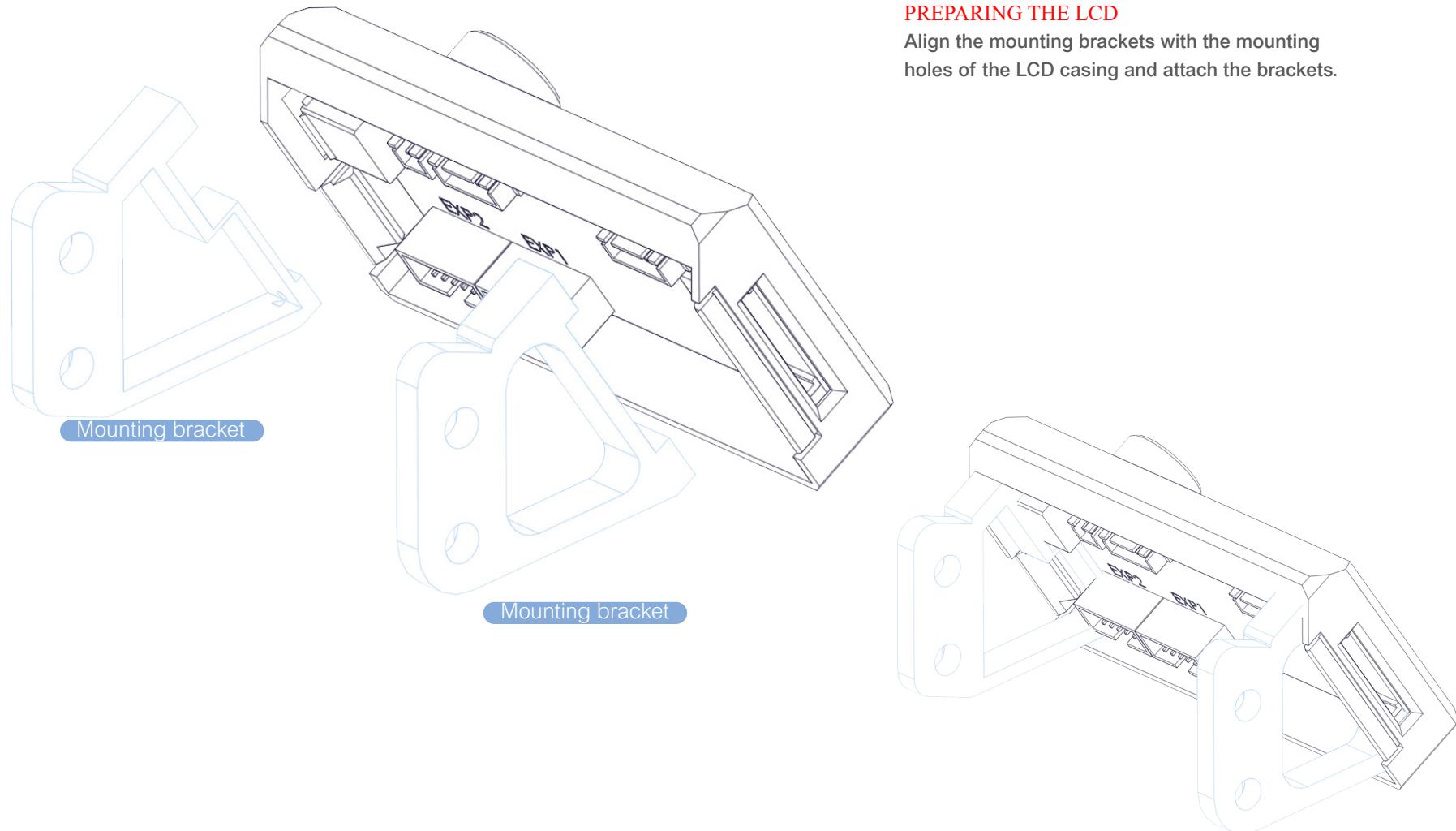


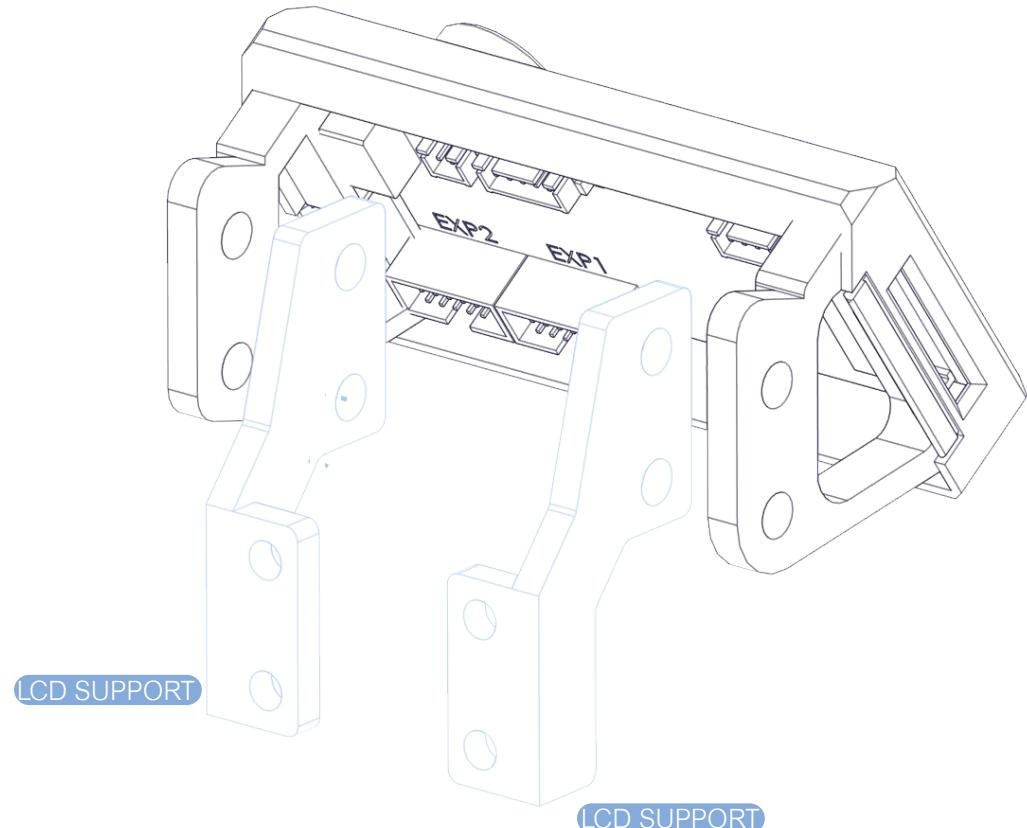
MOUNTING PSU

Secure the PSU assembly onto the frame using two M4x12 SHCS



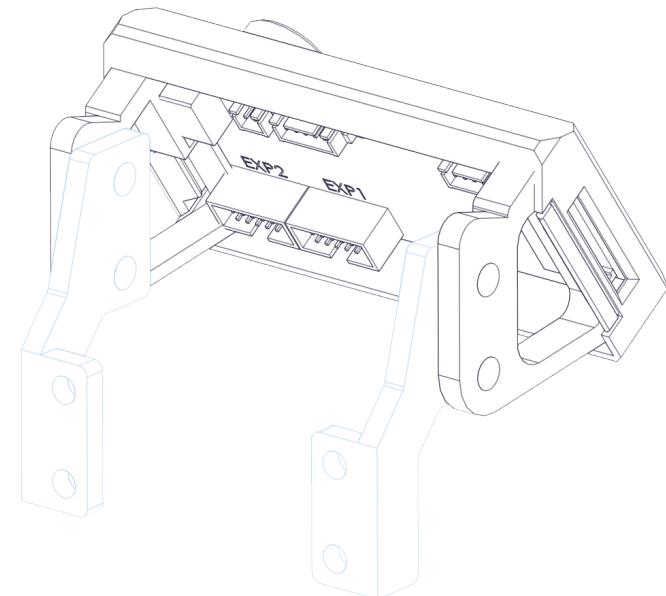
MOUNTING LCD

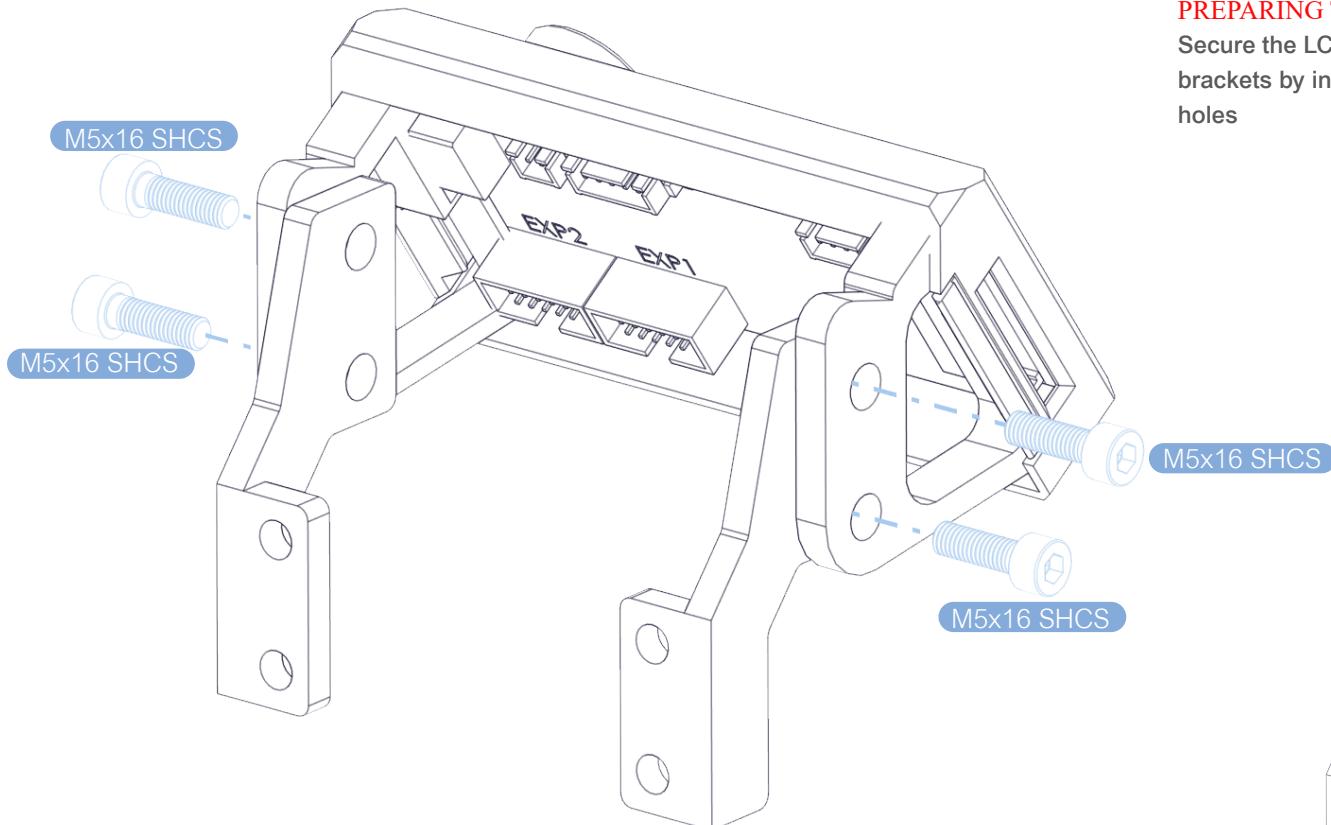




PREPARING THE LCD

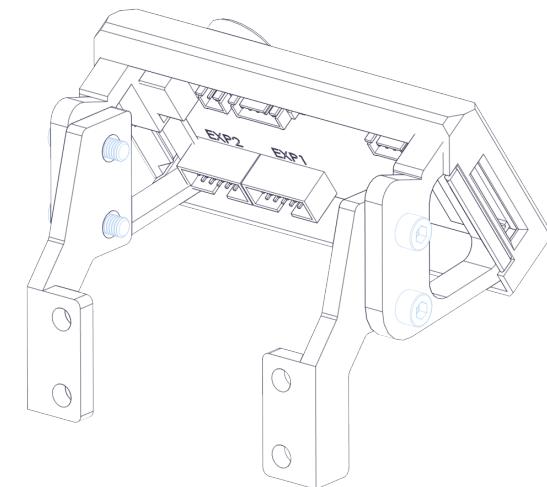
Align the LCD supports with the mounting holes found on the mounting brackets

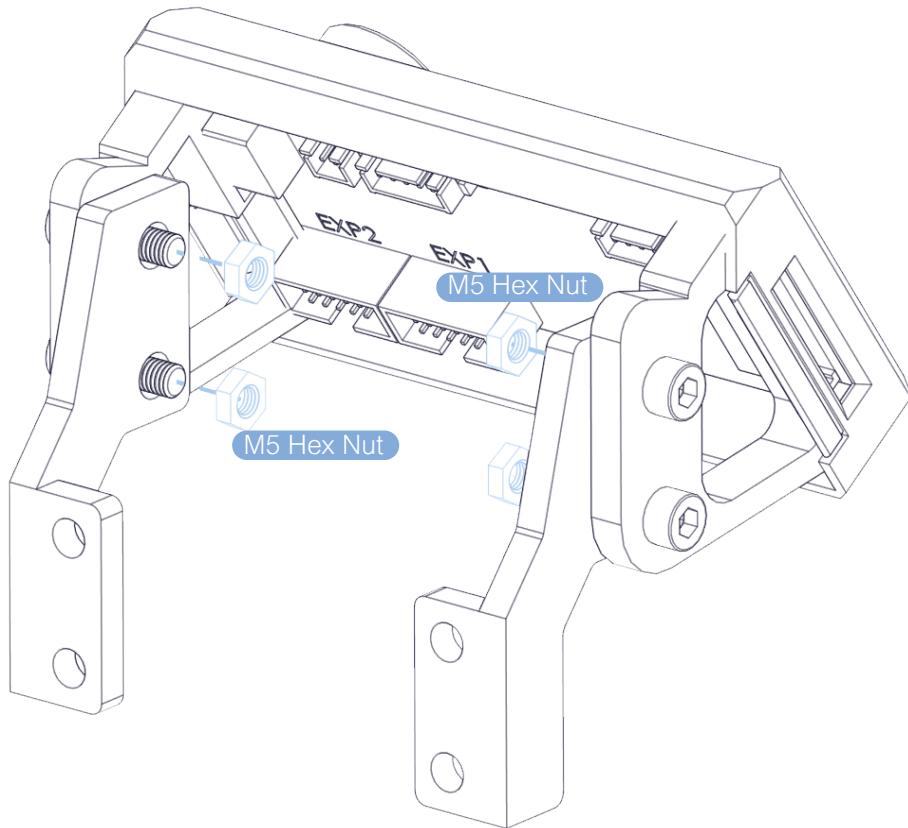




PREPARING THE LCD

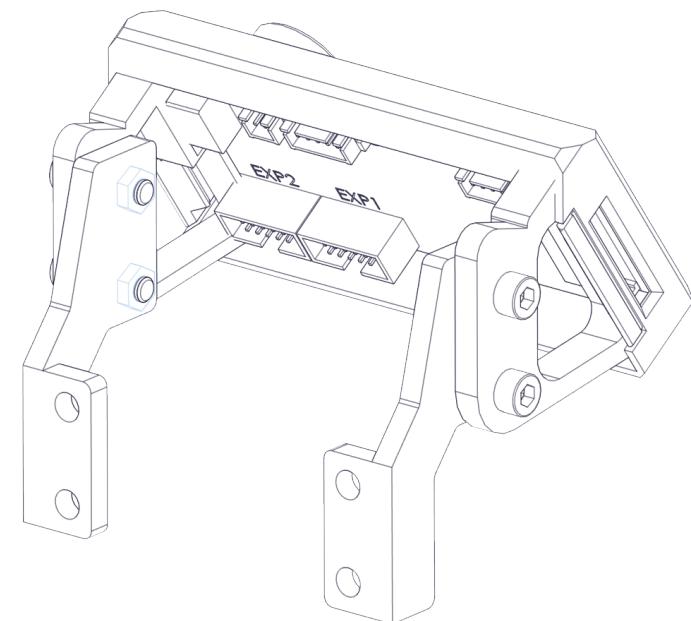
Secure the LCD supports onto the mounting brackets by inserting M5x16 SHCS into the bolt holes

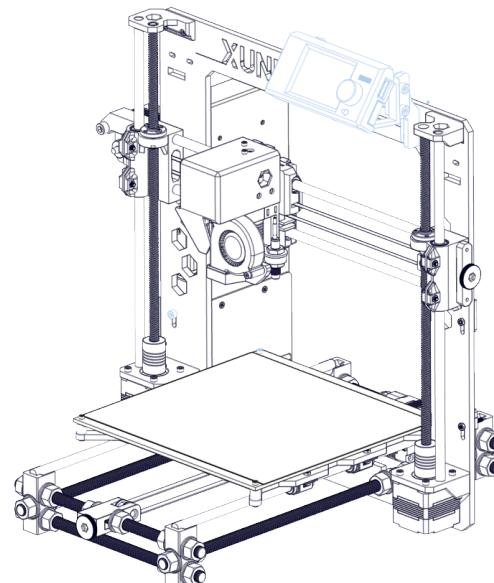
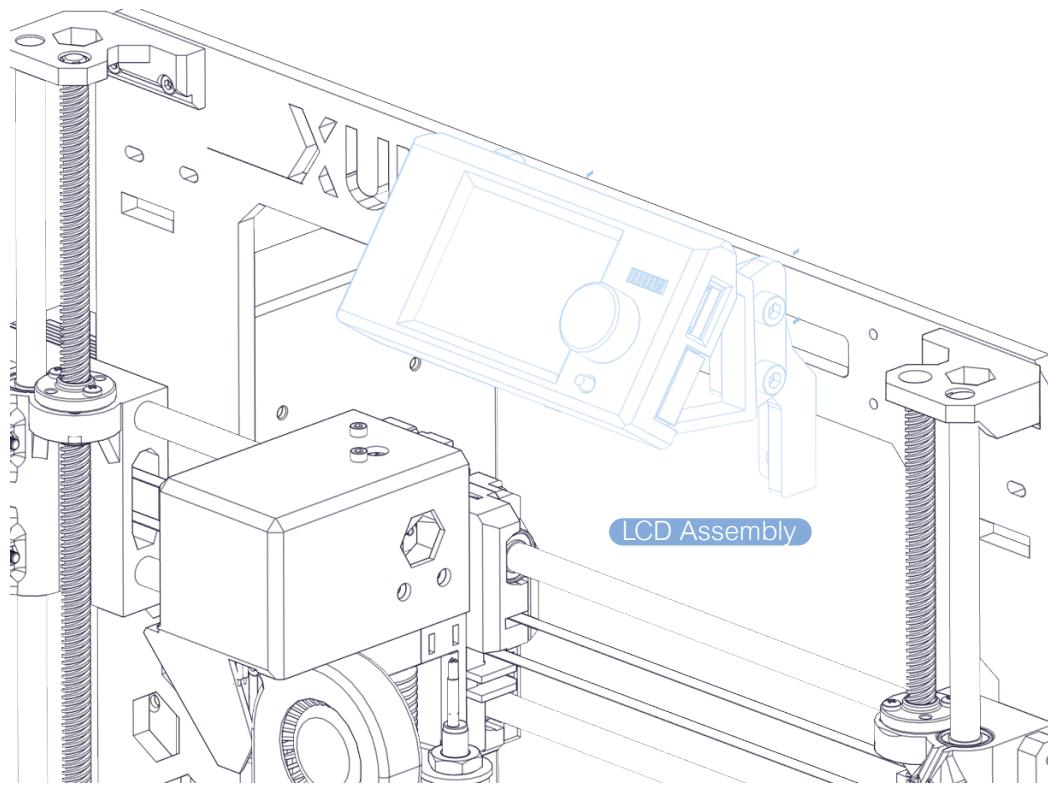




PREPARING THE LCD

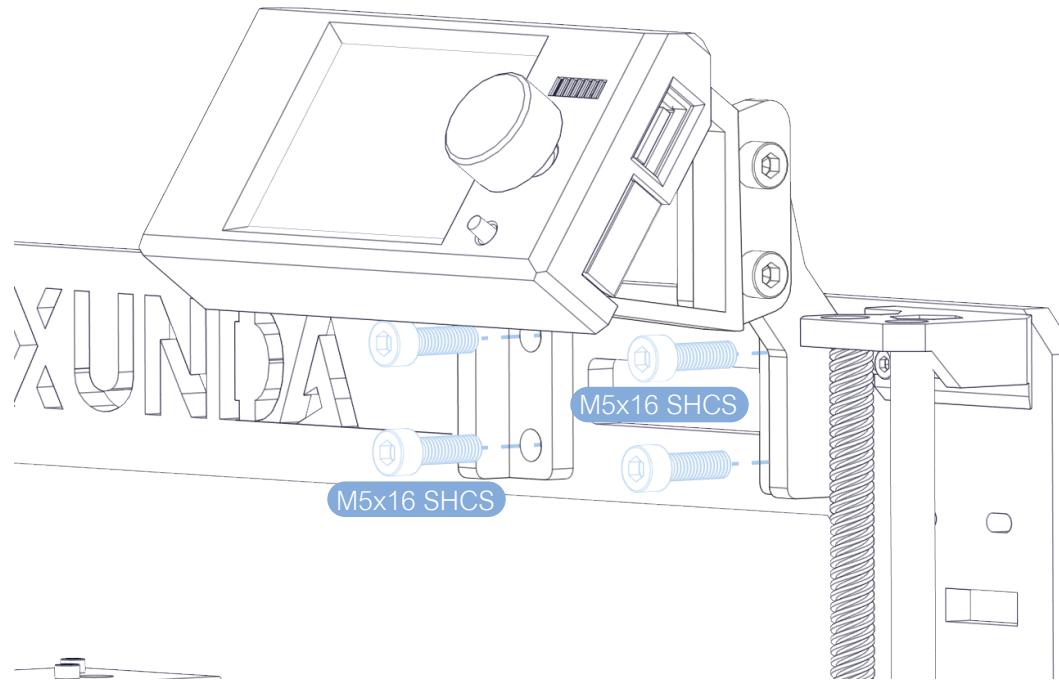
Secure the LCD supports onto the mounting brackets using M5 Hex Nuts





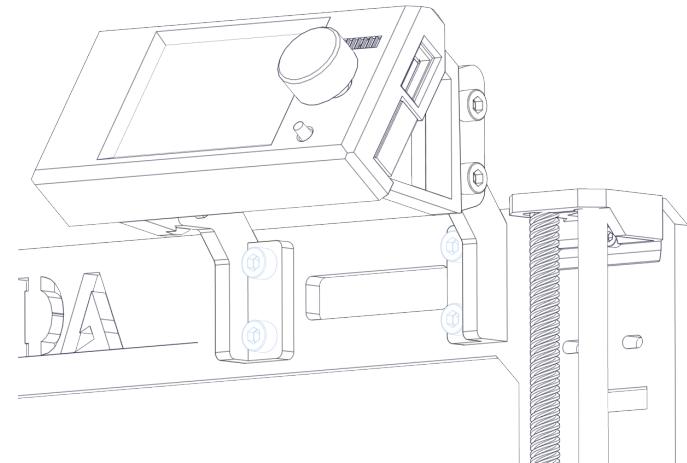
MOUNTING THE LCD

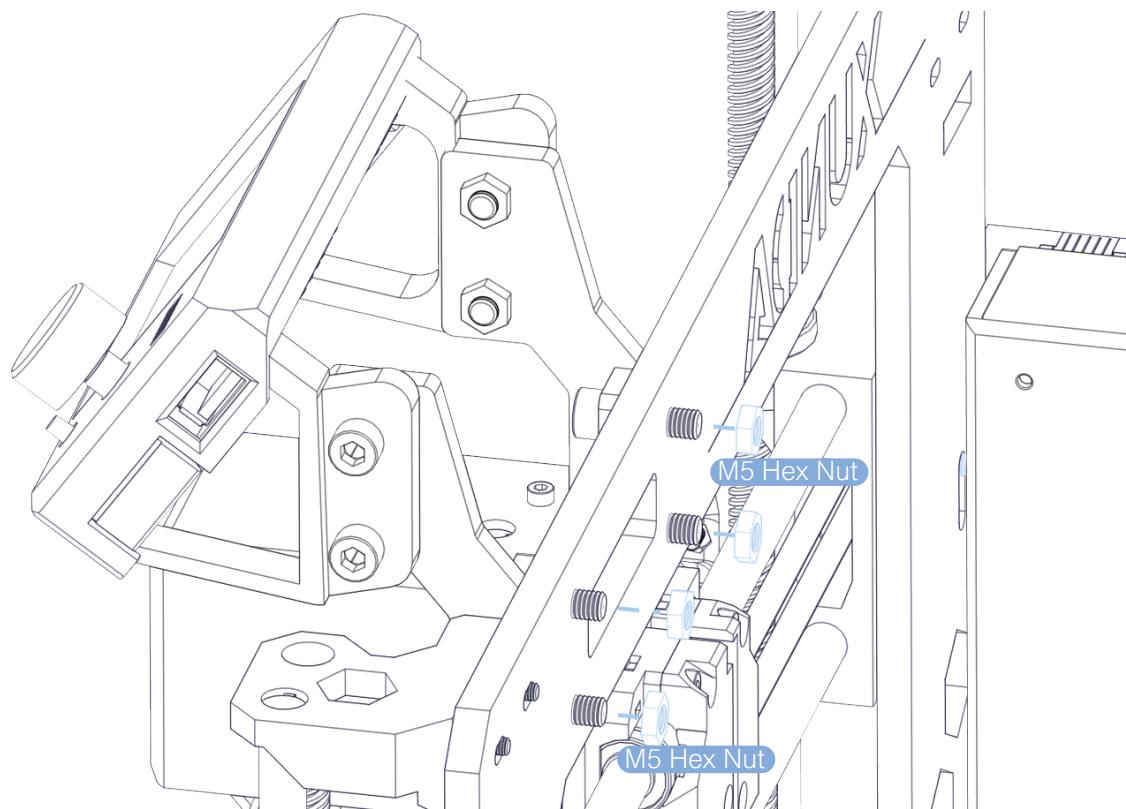
Align the LCD assembly with the mounting holes on the top right of the frame



MOUNTING THE LCD

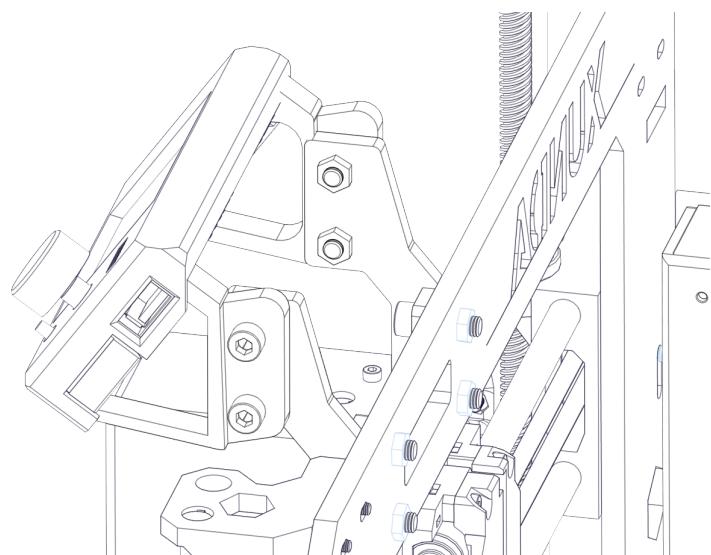
Secure the LCD onto the extruder frame by inserting M5x16 SHCS into the LCD mounting bolt holes

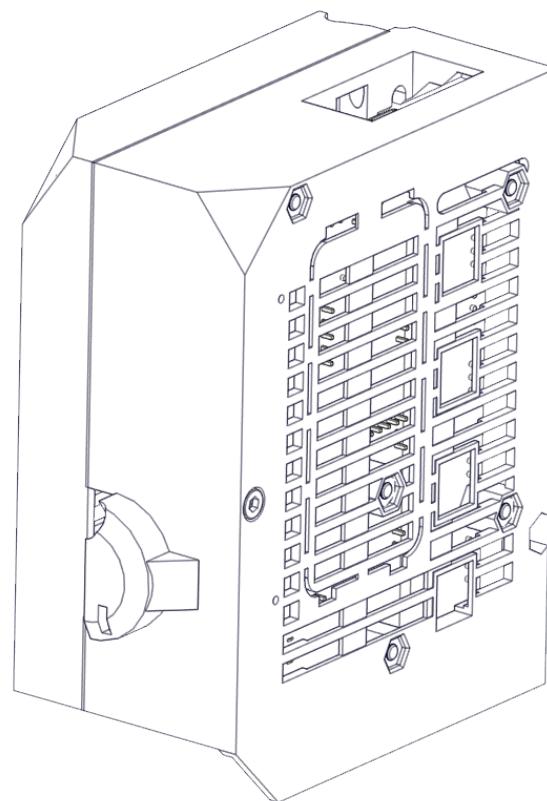


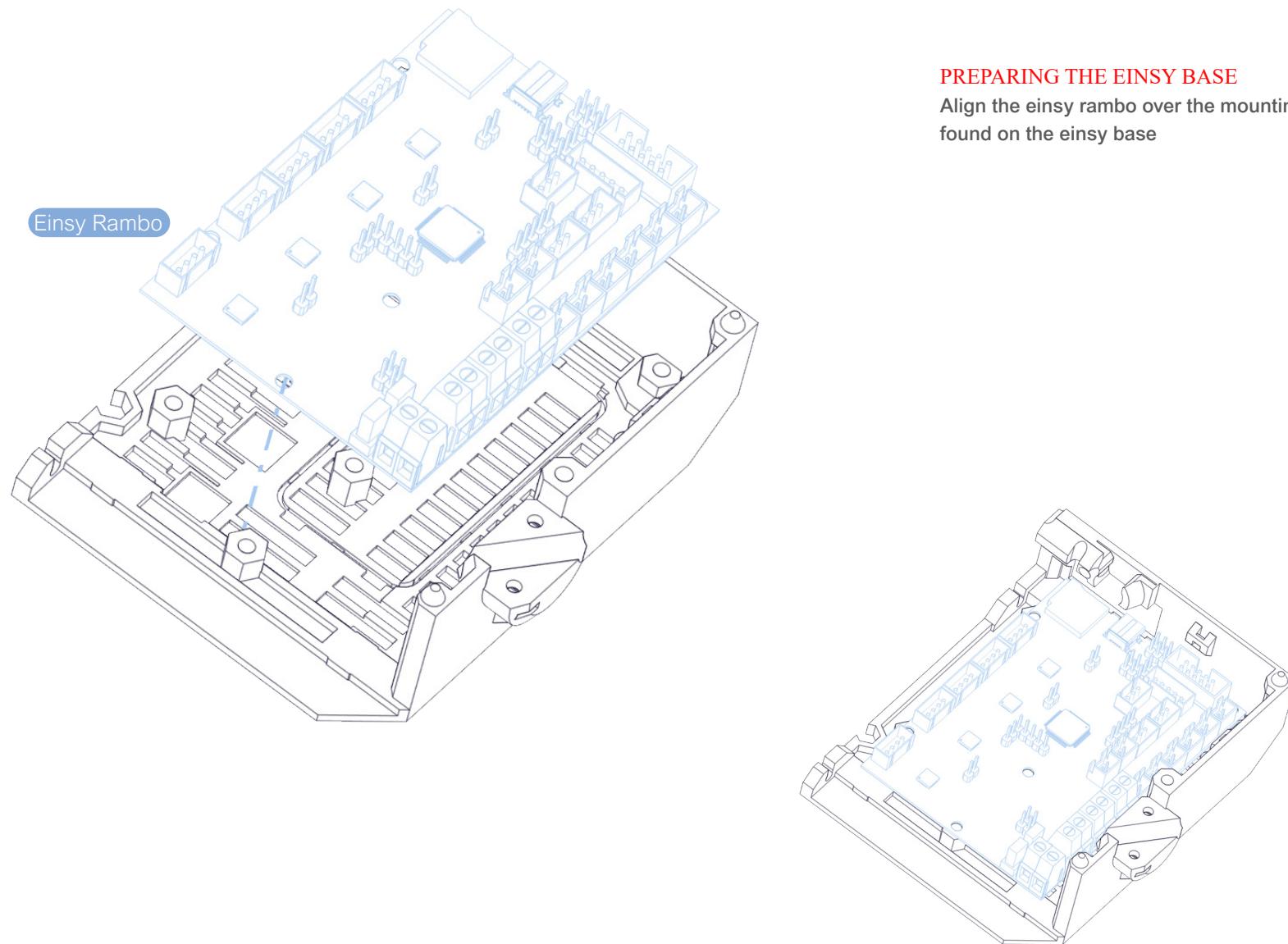


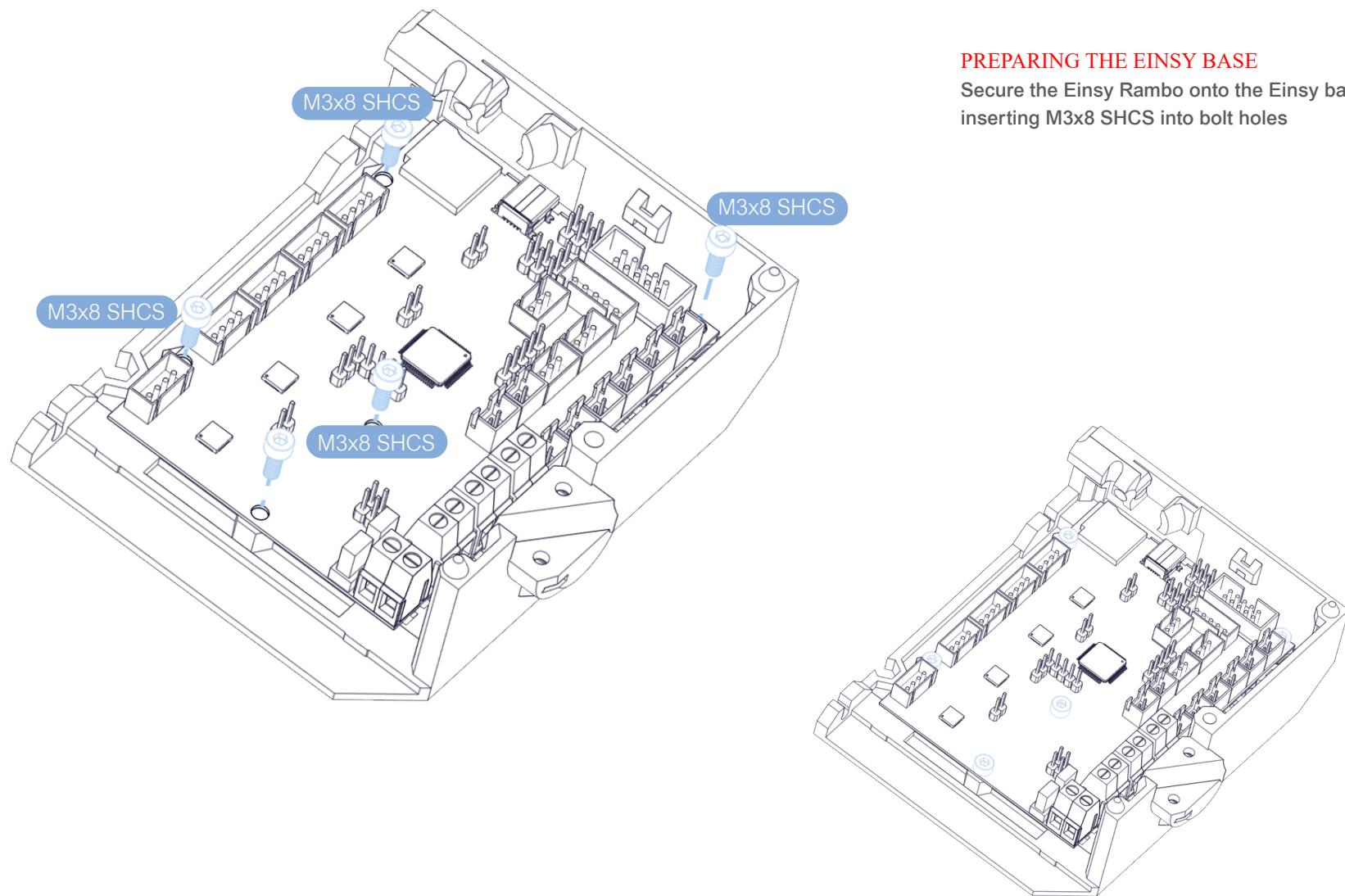
MOUNTING THE LCD

Secure the LCD assembly with M5 Hex nuts using wrenches/ spanners



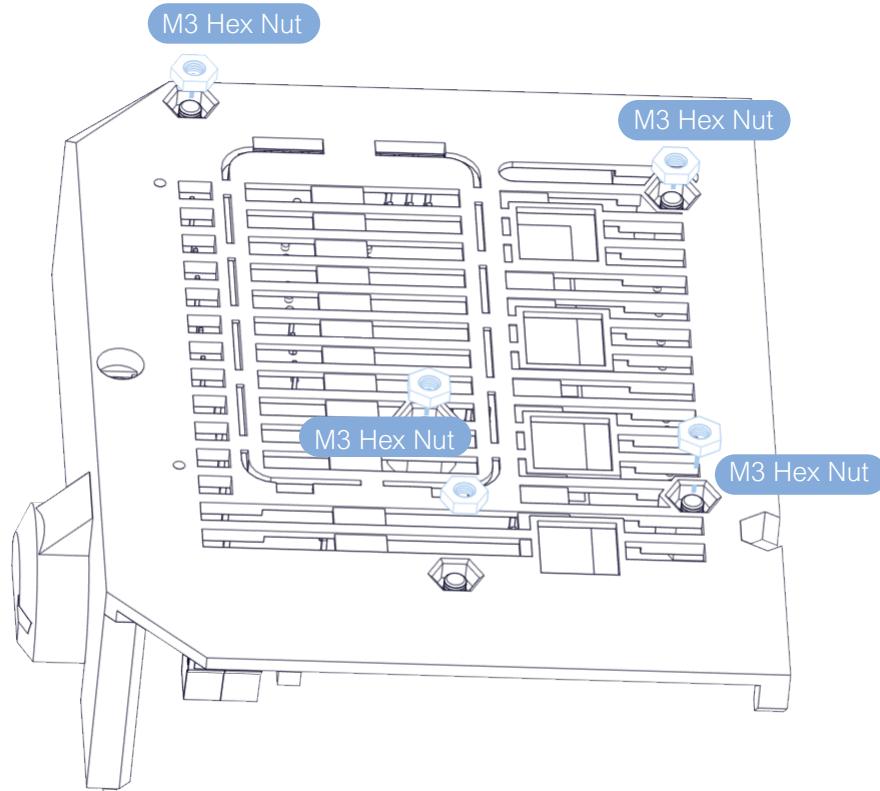




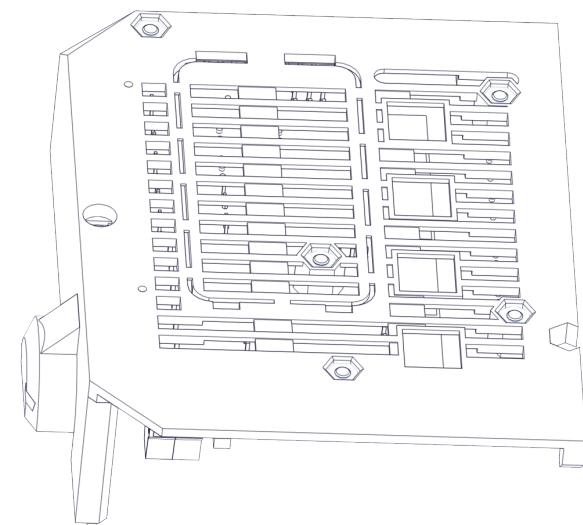


PREPARING THE EINSY BASE

Secure the Einsy Rambo onto the Einsy base by inserting M3x8 SHCS into bolt holes

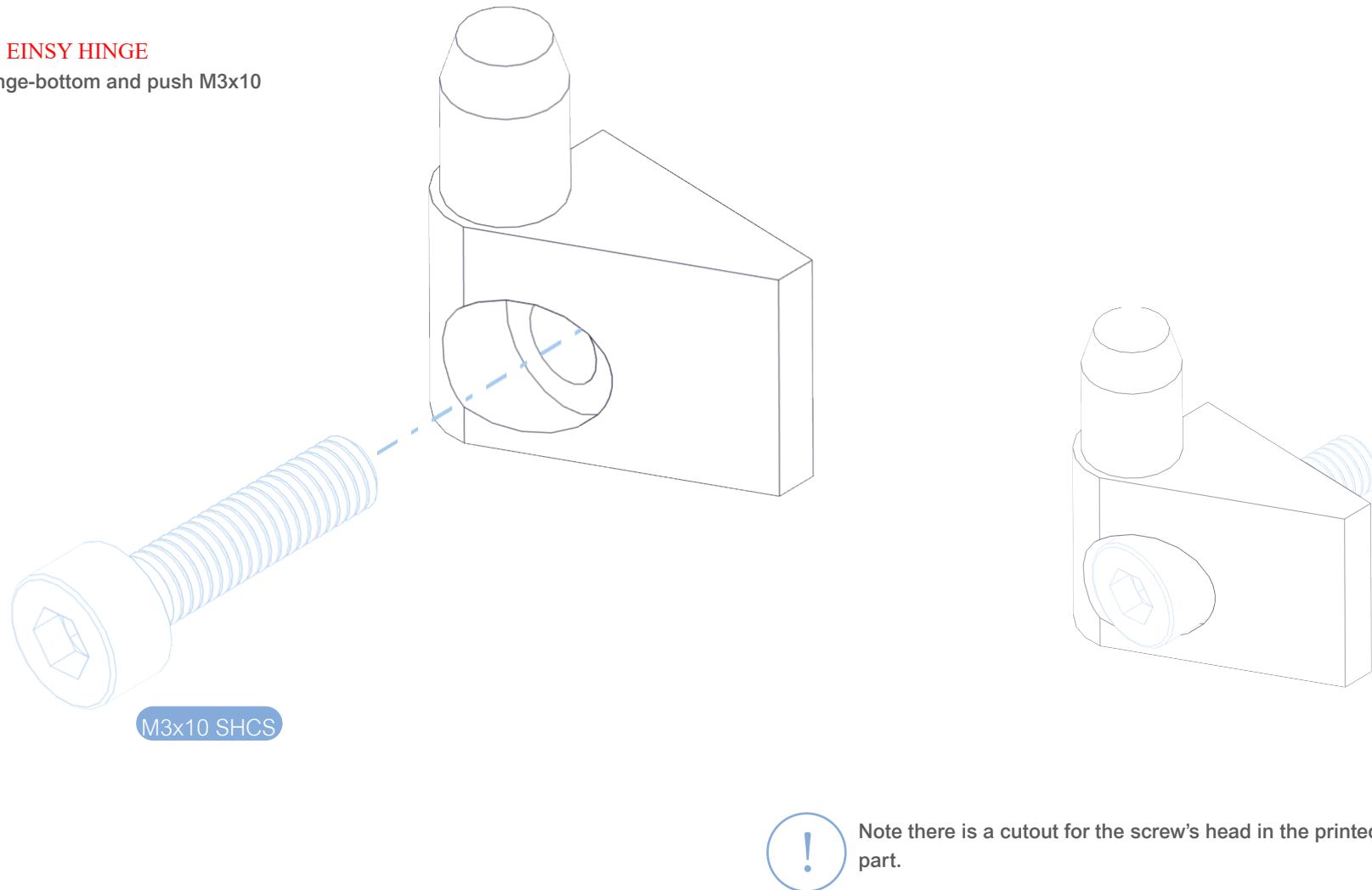
**PREPARING THE ENSY BASE**

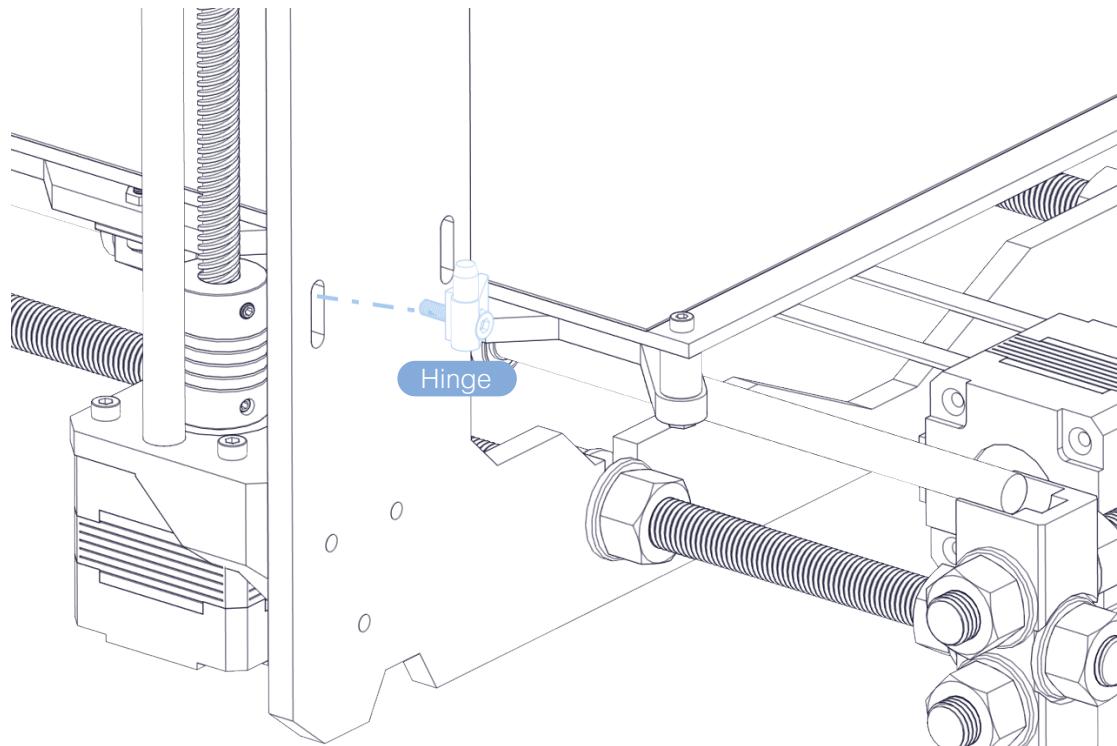
Secure the Einsy Rambo onto the Einsy base by inserting M3 Hex Nuts onto the ends of the M3x8 SHCS and tightening



INSERTING THE EINSY HINGE

Take the Einsy-hinge-bottom and push M3x10 screw through.

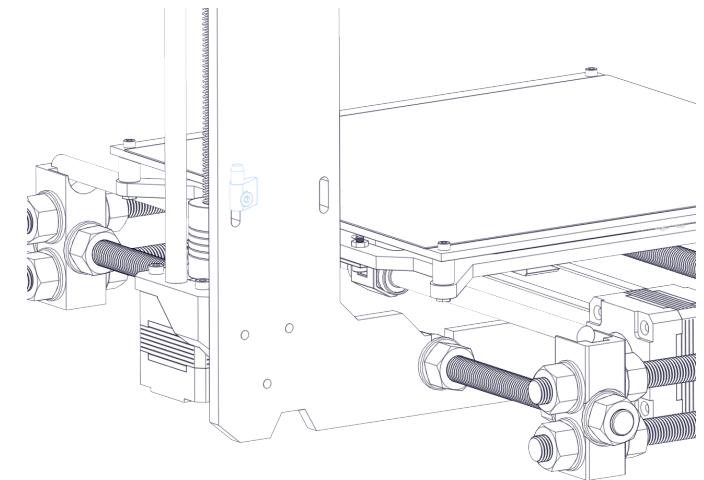


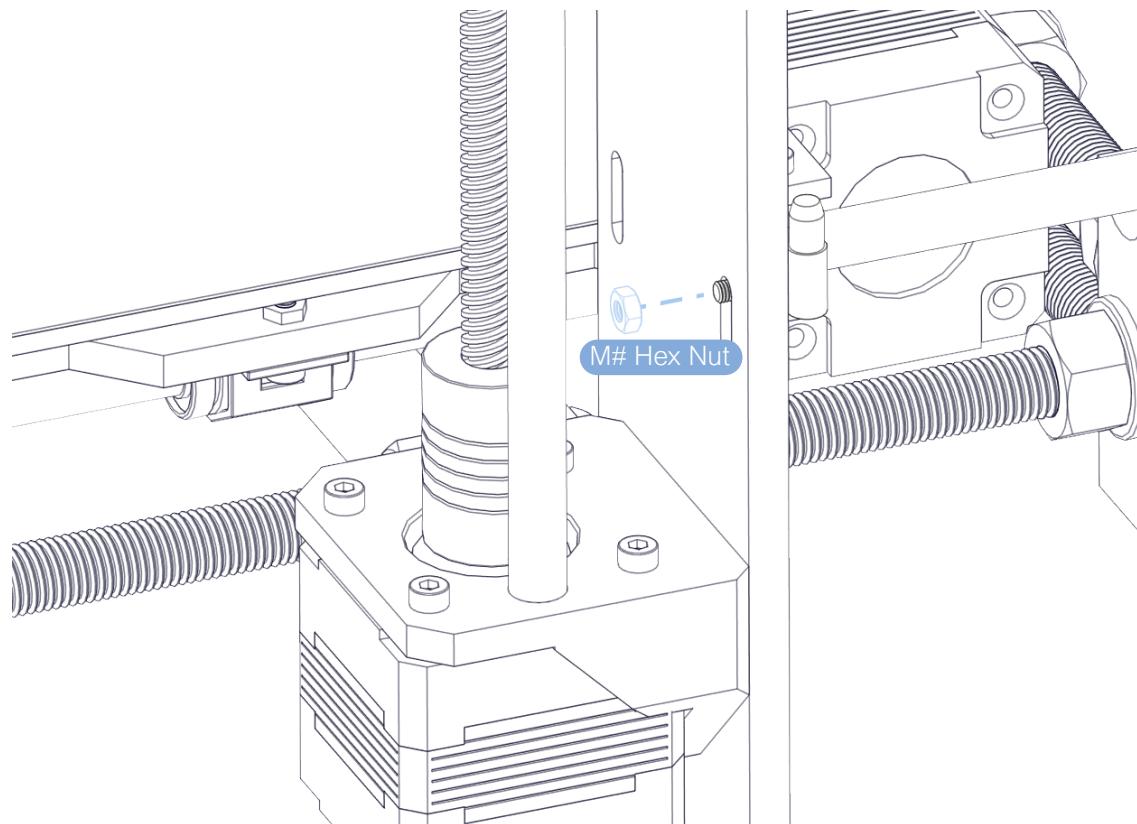


INSERTING THE EINSY HINGE

Locate the hole for the lower hinge.

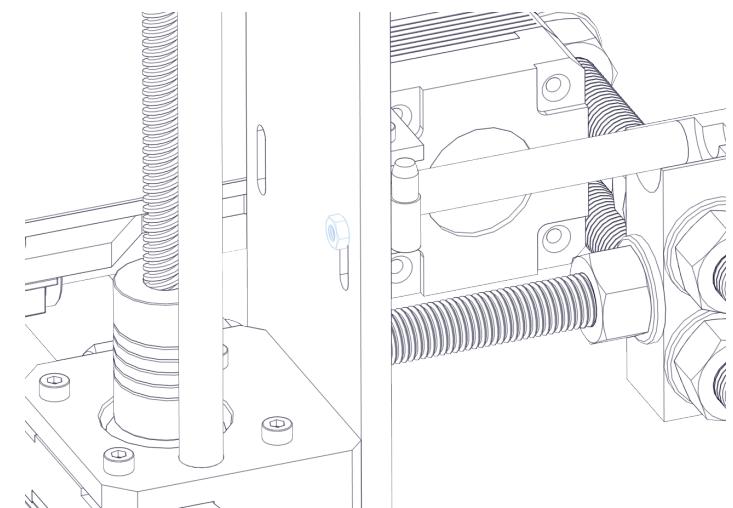
Place the hinge on the frame and tighten the screw. The hinge must be facing upwards.

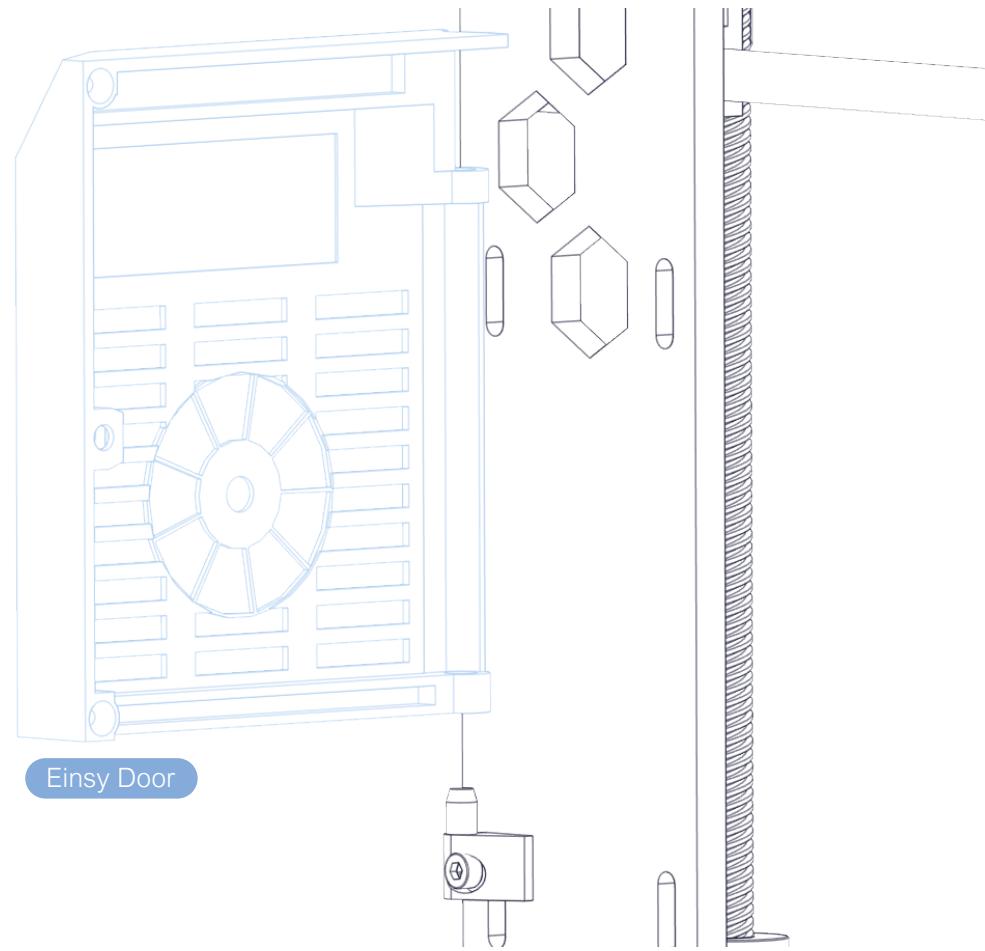




INSERTING THE EINSY HINGE

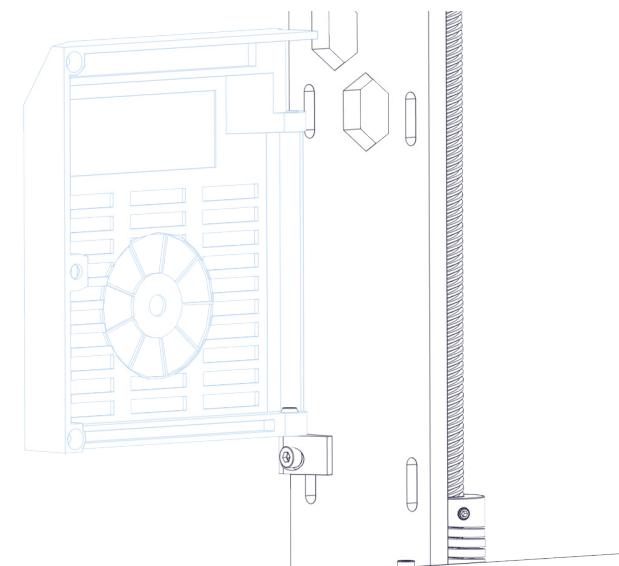
Insert M3 Hex nut at the screw end and tighten





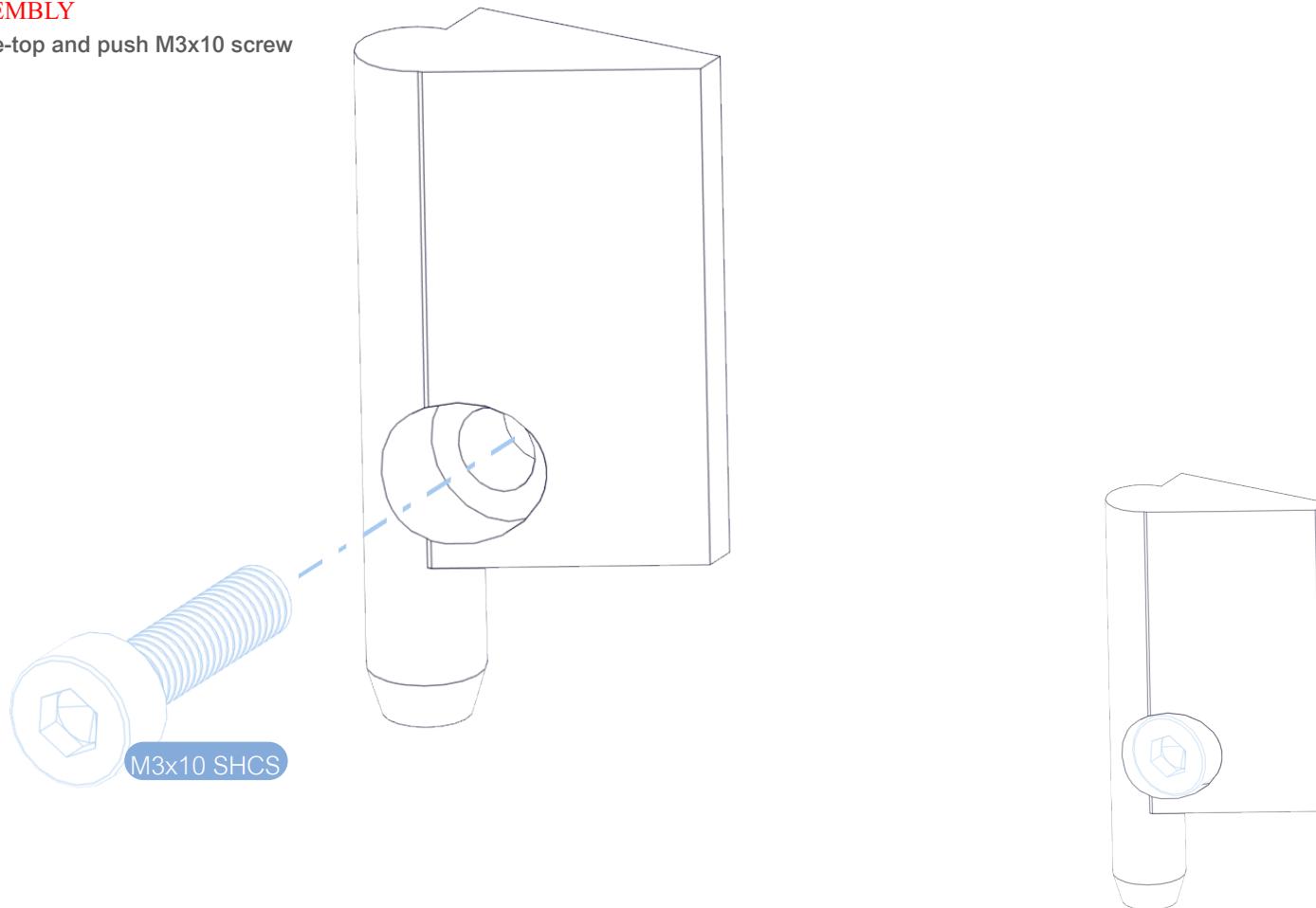
EINSY DOOR ASSEMBLY

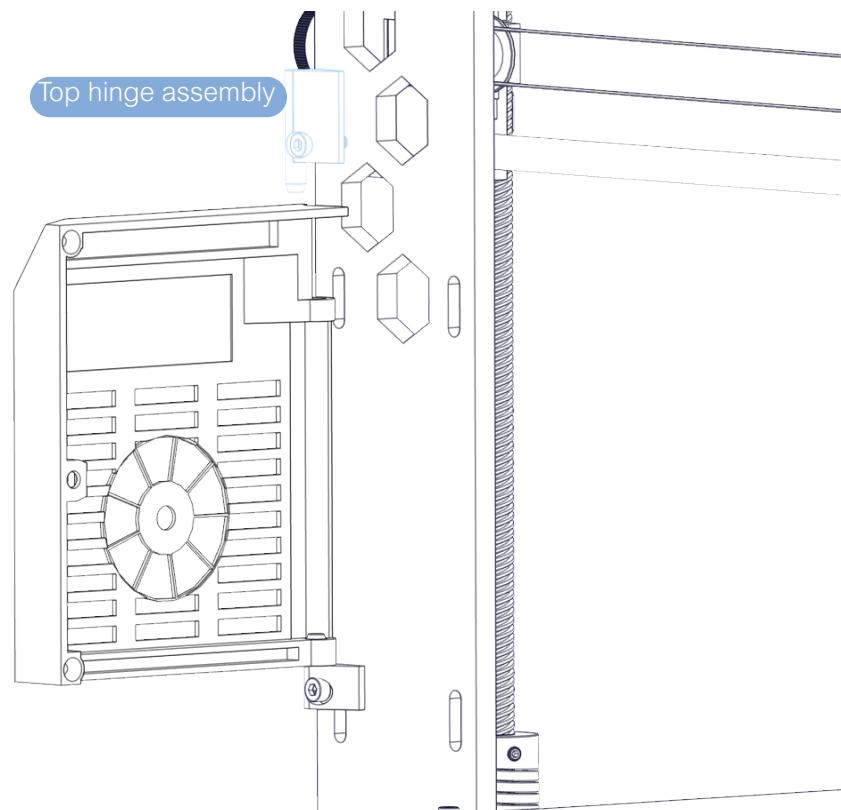
Place the Einsy-door on the lower hinge.



EINSY DOOR ASSEMBLY

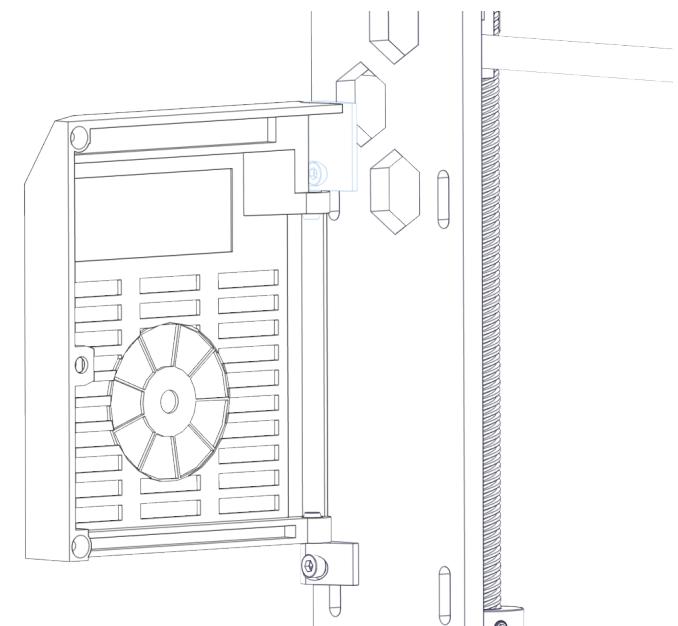
Take the Einsy-hinge-top and push M3x10 screw through.

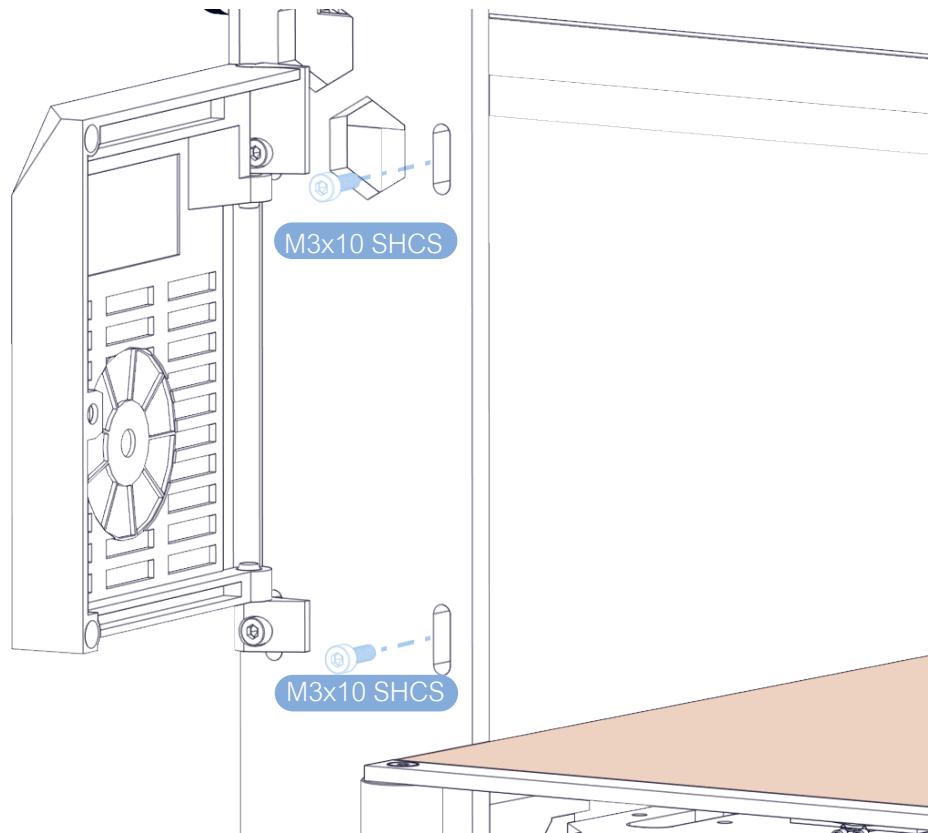




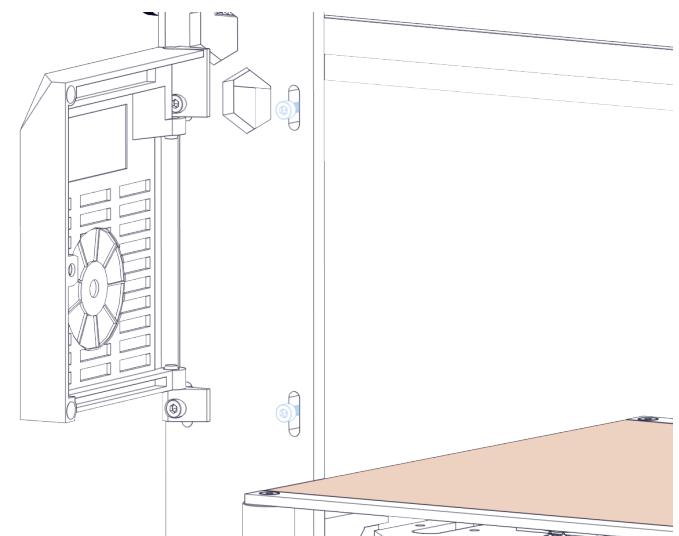
EINSY DOOR ASSEMBLY

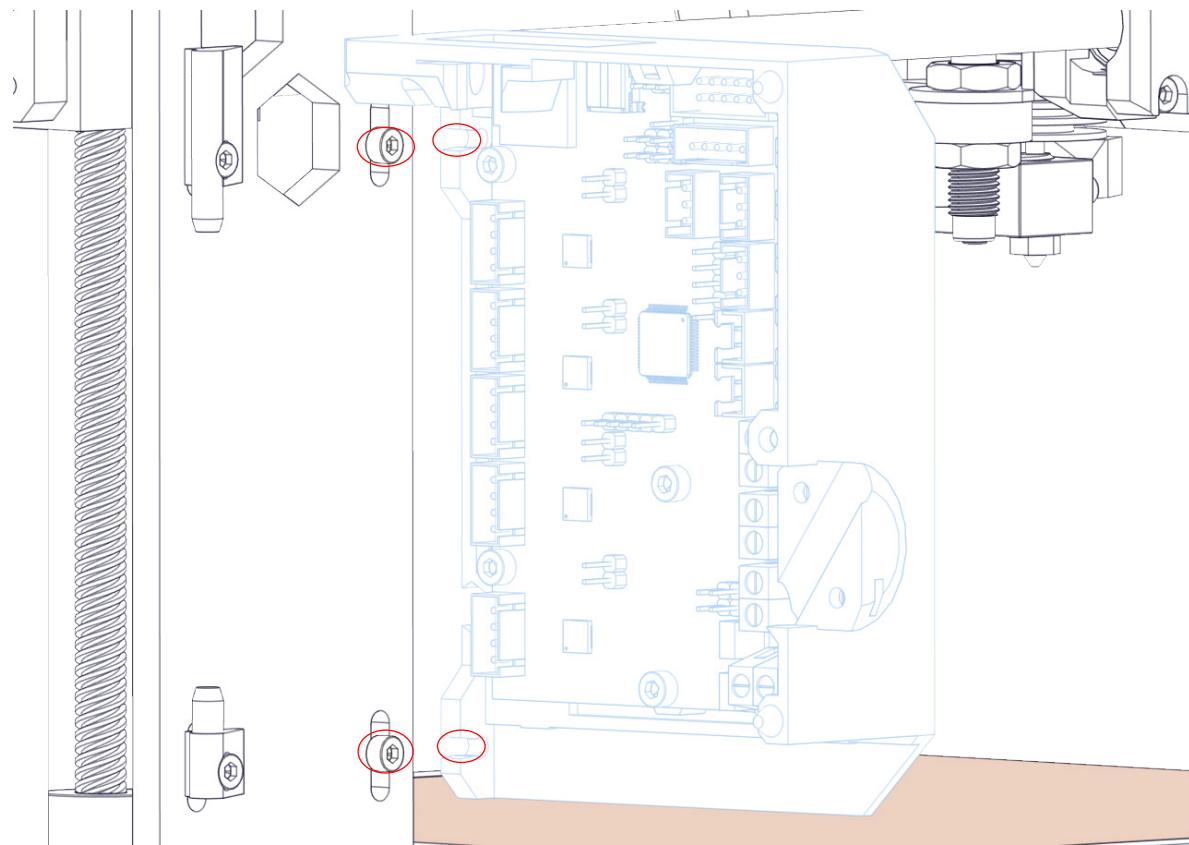
Assemble the Einsy-hinge-top in the door and mount it to the frame.



**EINSY BASE ASSEMBLY**

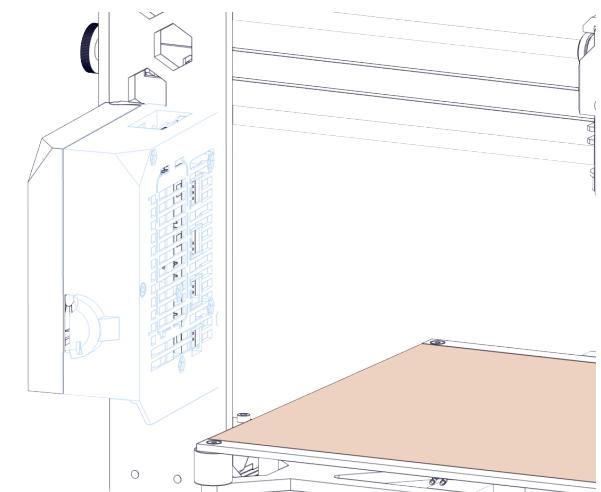
Insert M3x10 screws in the einsy base mounting holes and tighten them just slightly. 3-4 turns are enough for now.



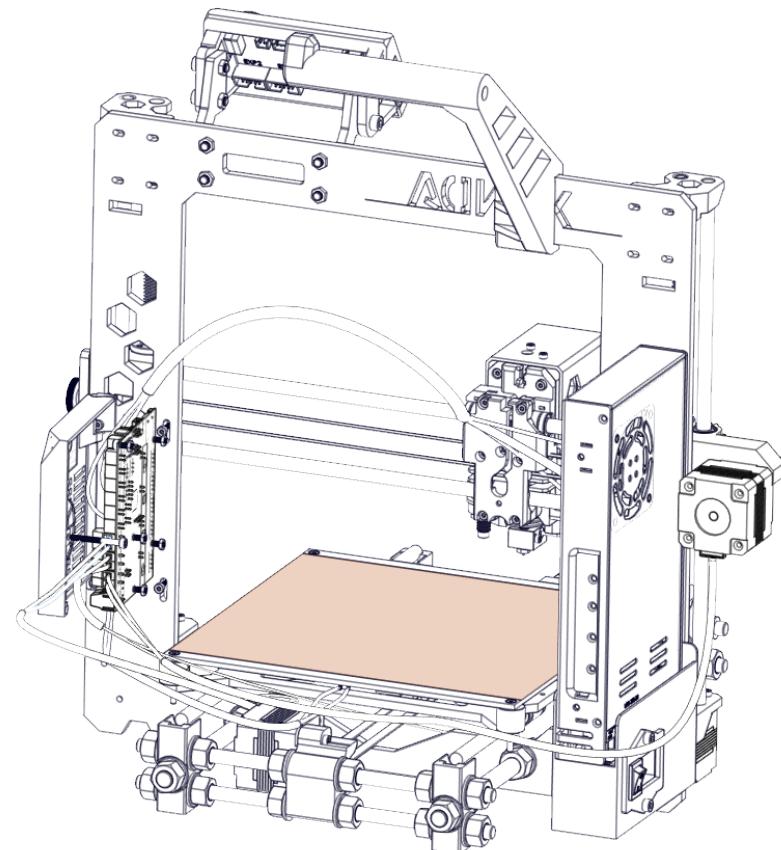


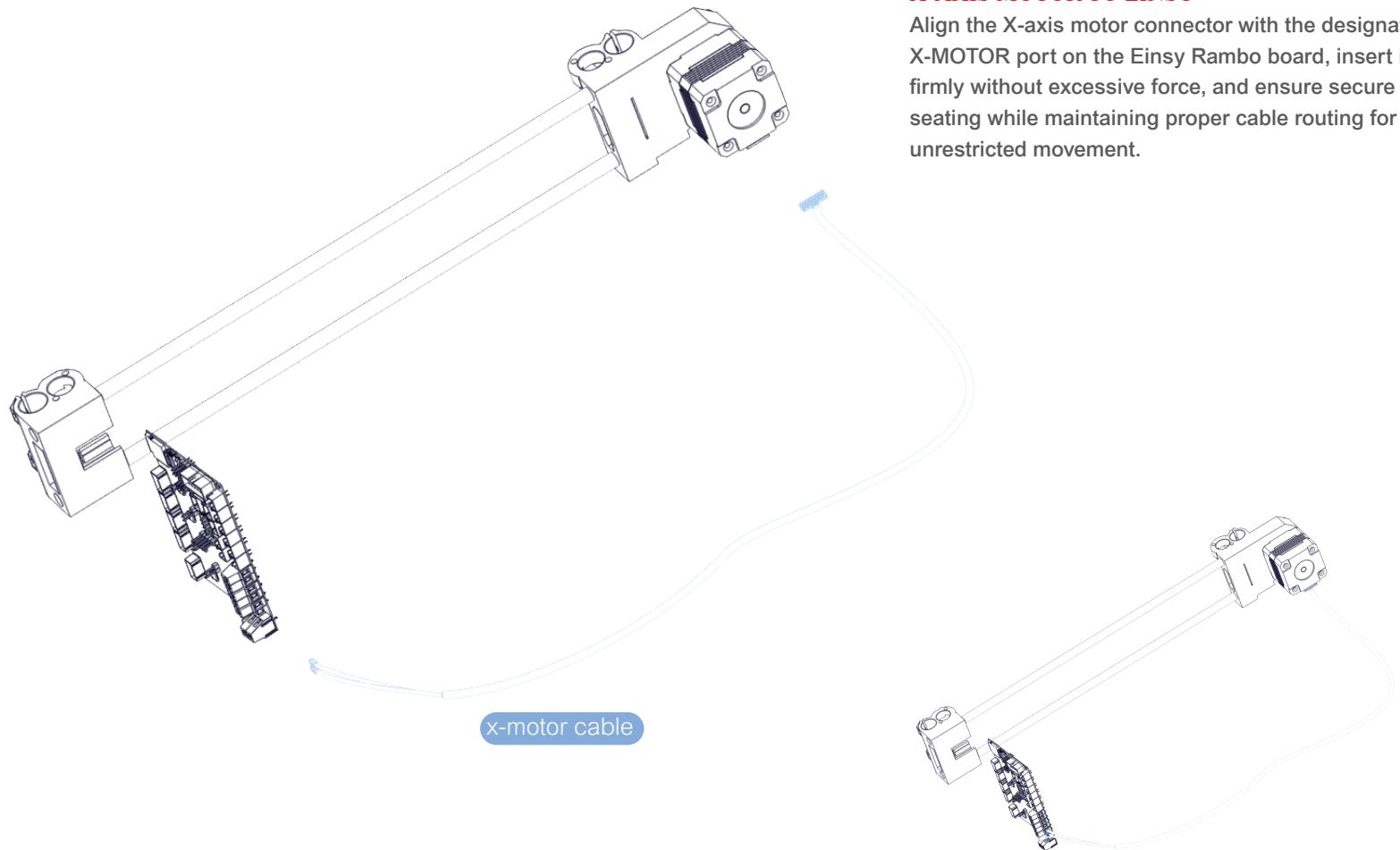
EINSY BASE ASSEMBLY

Mount the Einsky base assembly onto the frame by inserting it on the M3x10 SHCS and tighten them



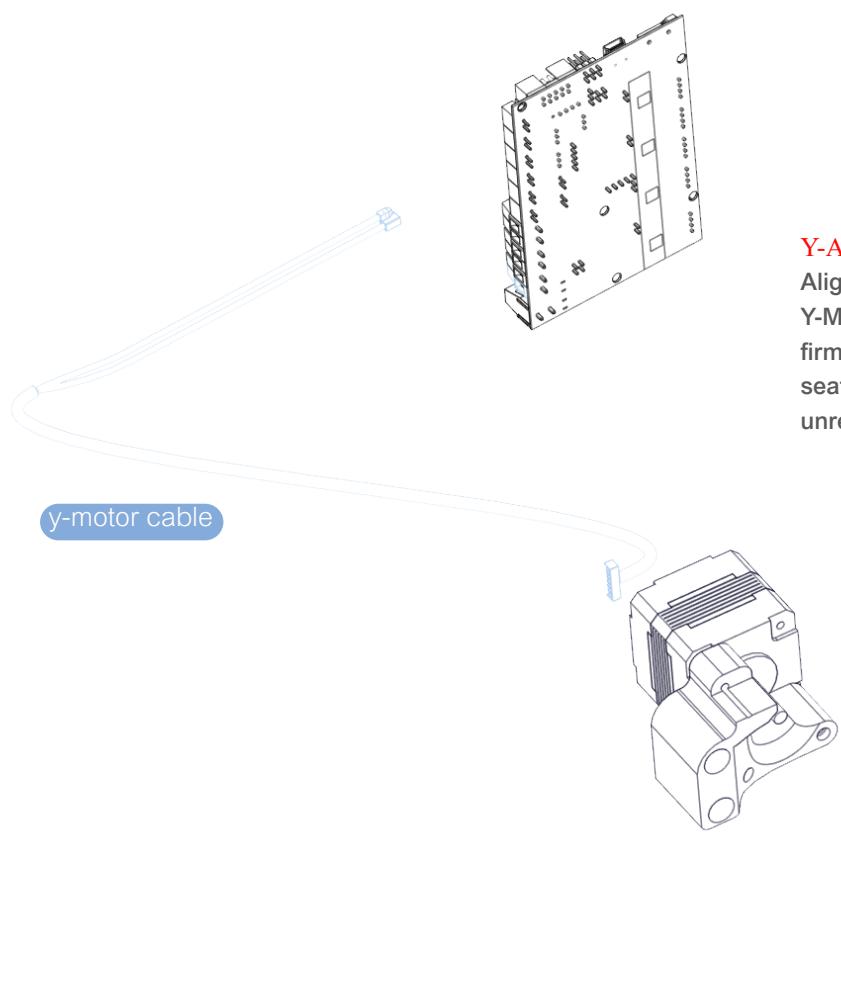
CABLE LINES



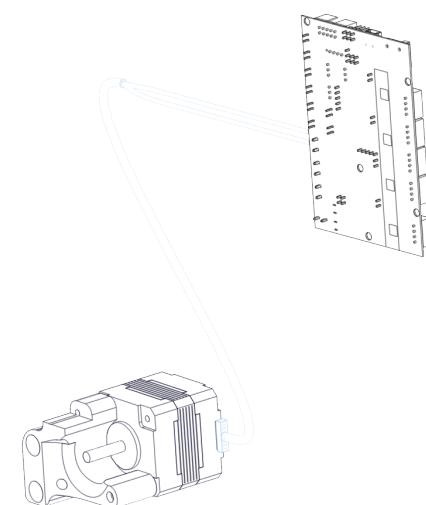
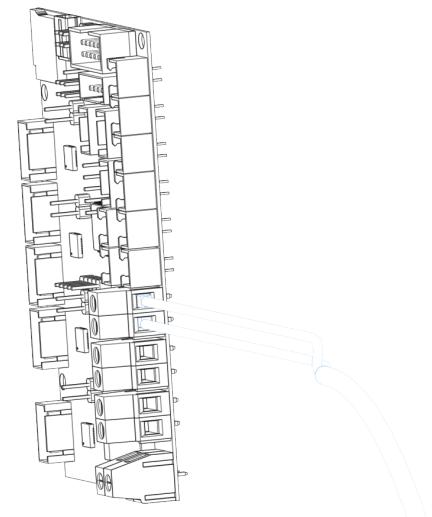


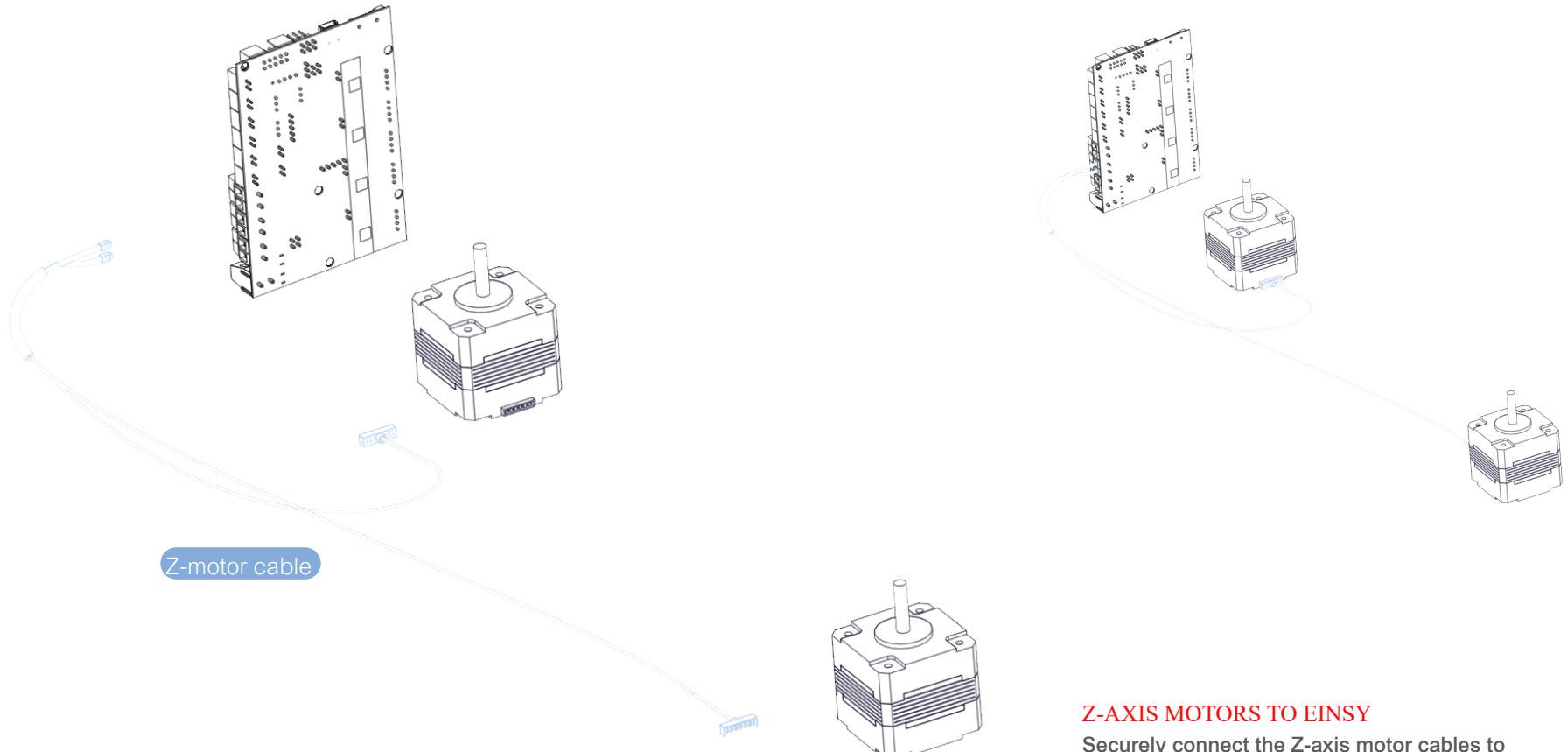
X-AXIS MOTOR TO EINSY

Align the X-axis motor connector with the designated X-MOTOR port on the EINSY Rambo board, insert it firmly without excessive force, and ensure secure seating while maintaining proper cable routing for unrestricted movement.

**Y-AXIS MOTOR TO EINSY**

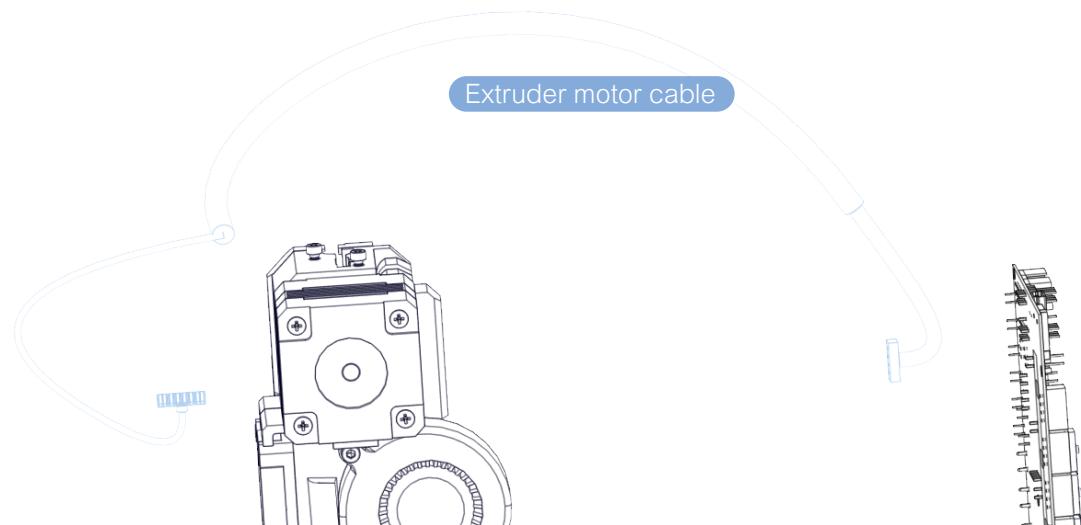
Align the Y-axis motor connector with the designated Y-MOTOR port on the Einsy Rambo board, insert it firmly without excessive force, and ensure secure seating while maintaining proper cable routing for unrestricted movement.





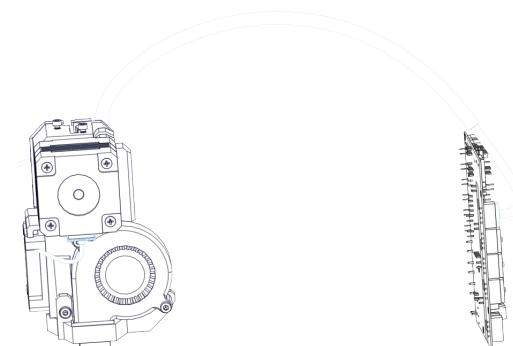
Z-AXIS MOTORS TO EINSY

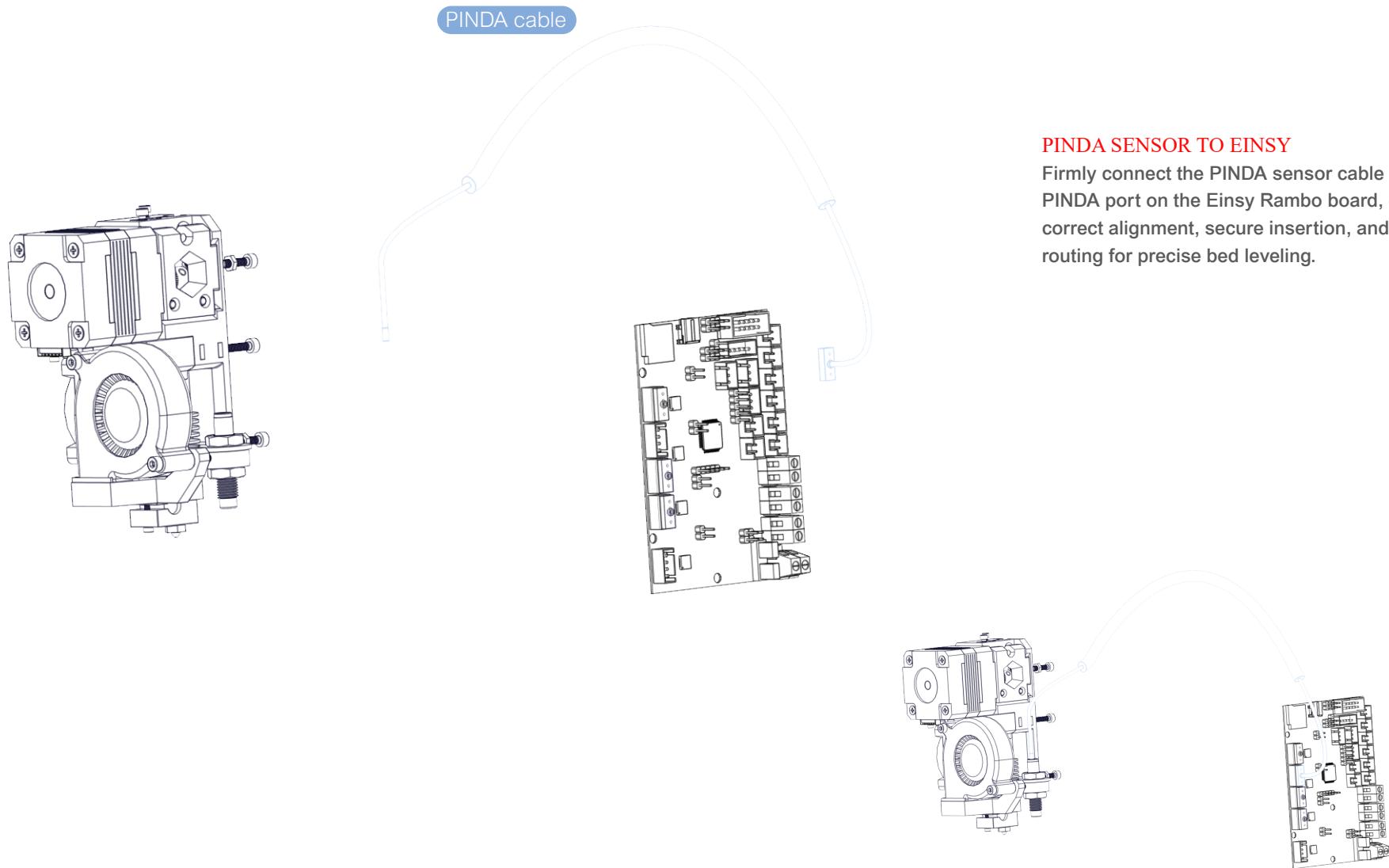
Securely connect the Z-axis motor cables to the designated Z-MOTOR ports on the Einsy Rambo board, ensuring proper alignment, firm insertion, and smooth cable routing for optimal movement.



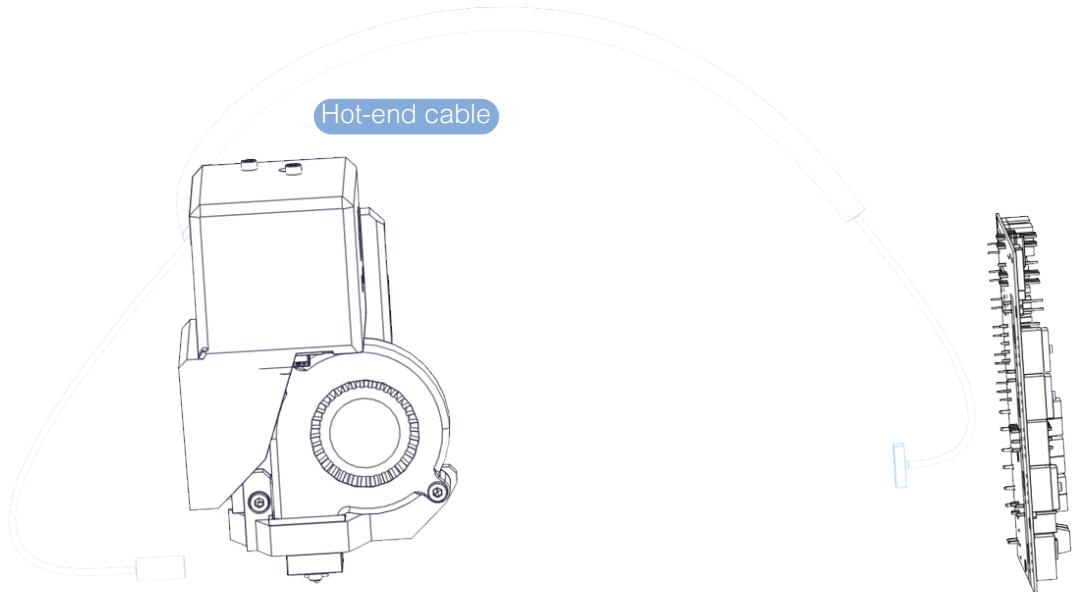
EXTRUDER MOTOR TO EINSY

Connect the extruder motor cable to the E-MOTOR port on the Einsy Rambo board, ensuring proper alignment, firm insertion, and smooth cable routing for reliable operation.



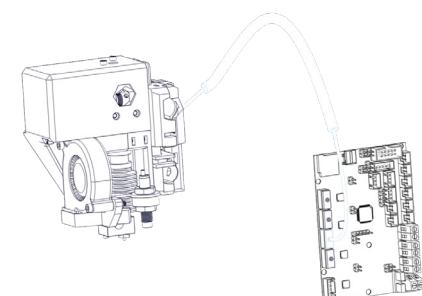
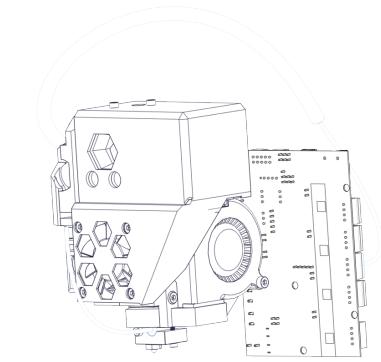
**PINDA SENSOR TO EINSY**

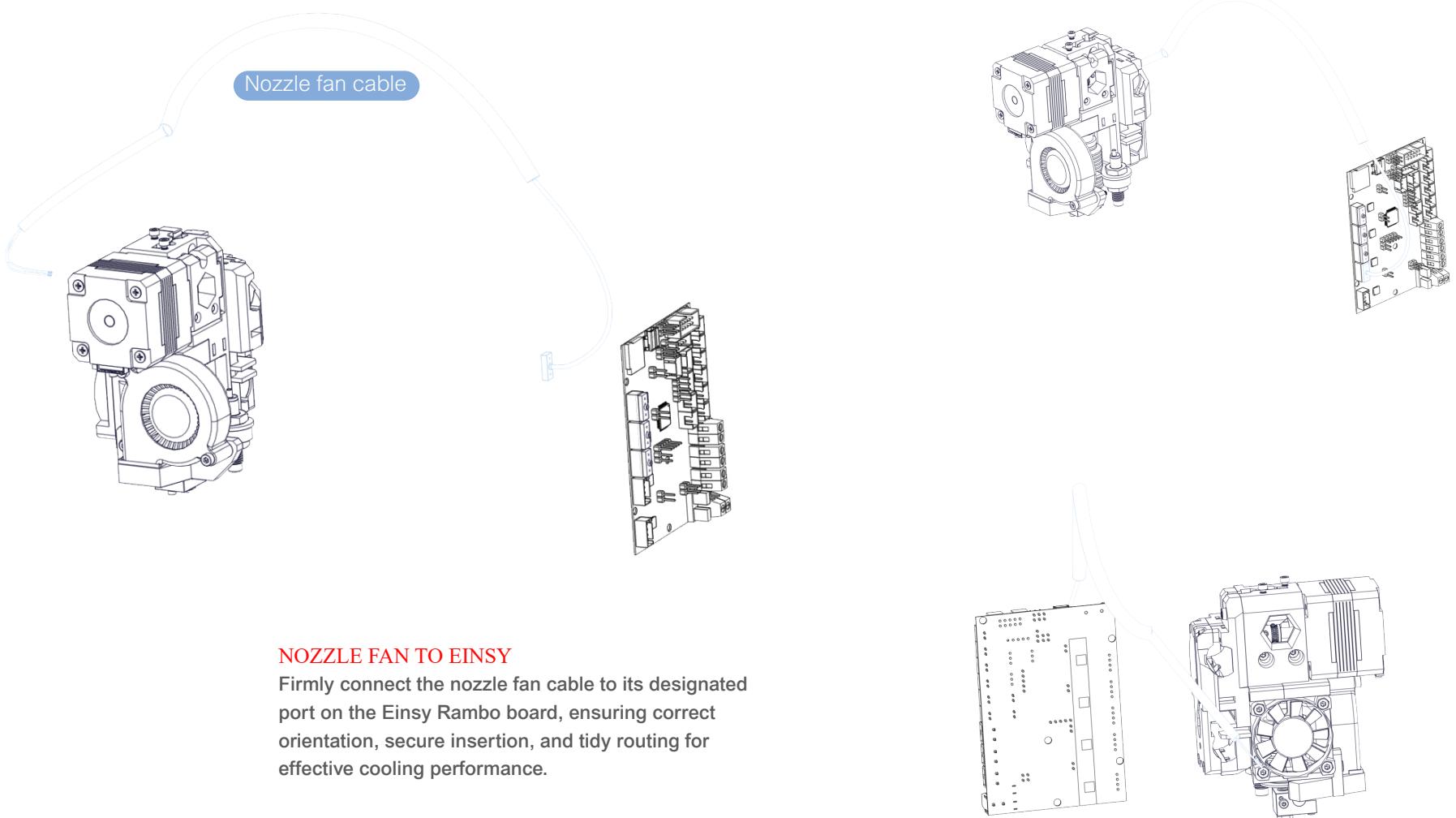
Firmly connect the PINDA sensor cable to its PINDA port on the EINSY Rambo board, ensuring correct alignment, secure insertion, and organized routing for precise bed leveling.



HOT-END TO EINSY

Firmly connect the hot-end cable to its designated port on the Einsy Rambo board, ensuring proper orientation, secure insertion, and neatly routed wiring to maintain efficient extrusion performance.





NOZZLE FAN TO EINSY

Firmly connect the nozzle fan cable to its designated port on the EINSY Rambo board, ensuring correct orientation, secure insertion, and tidy routing for effective cooling performance.

EXTRUDER-RAMBO CONNECTIONS

