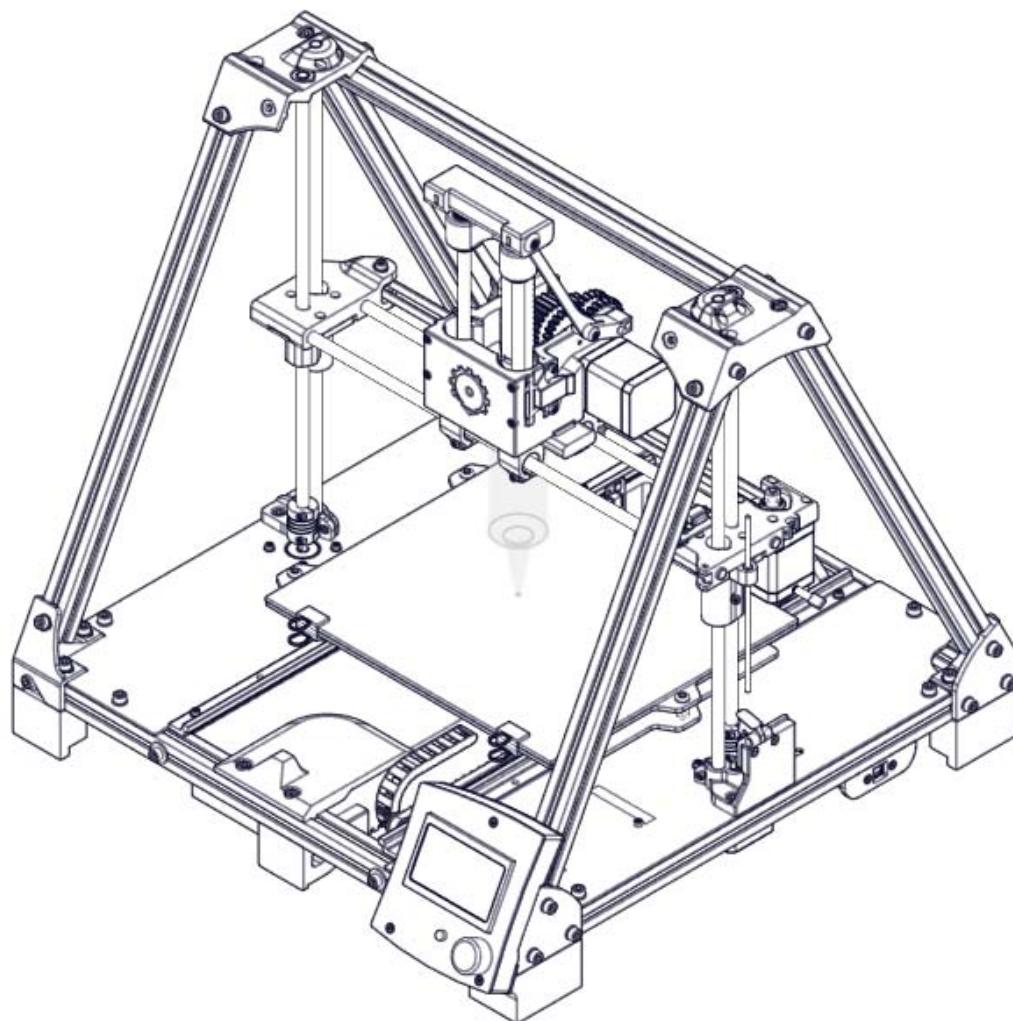




PASTE EXTRUDER

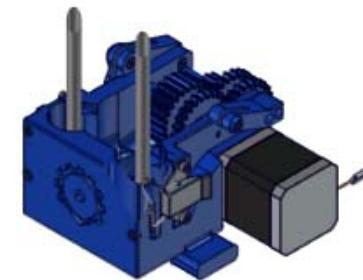
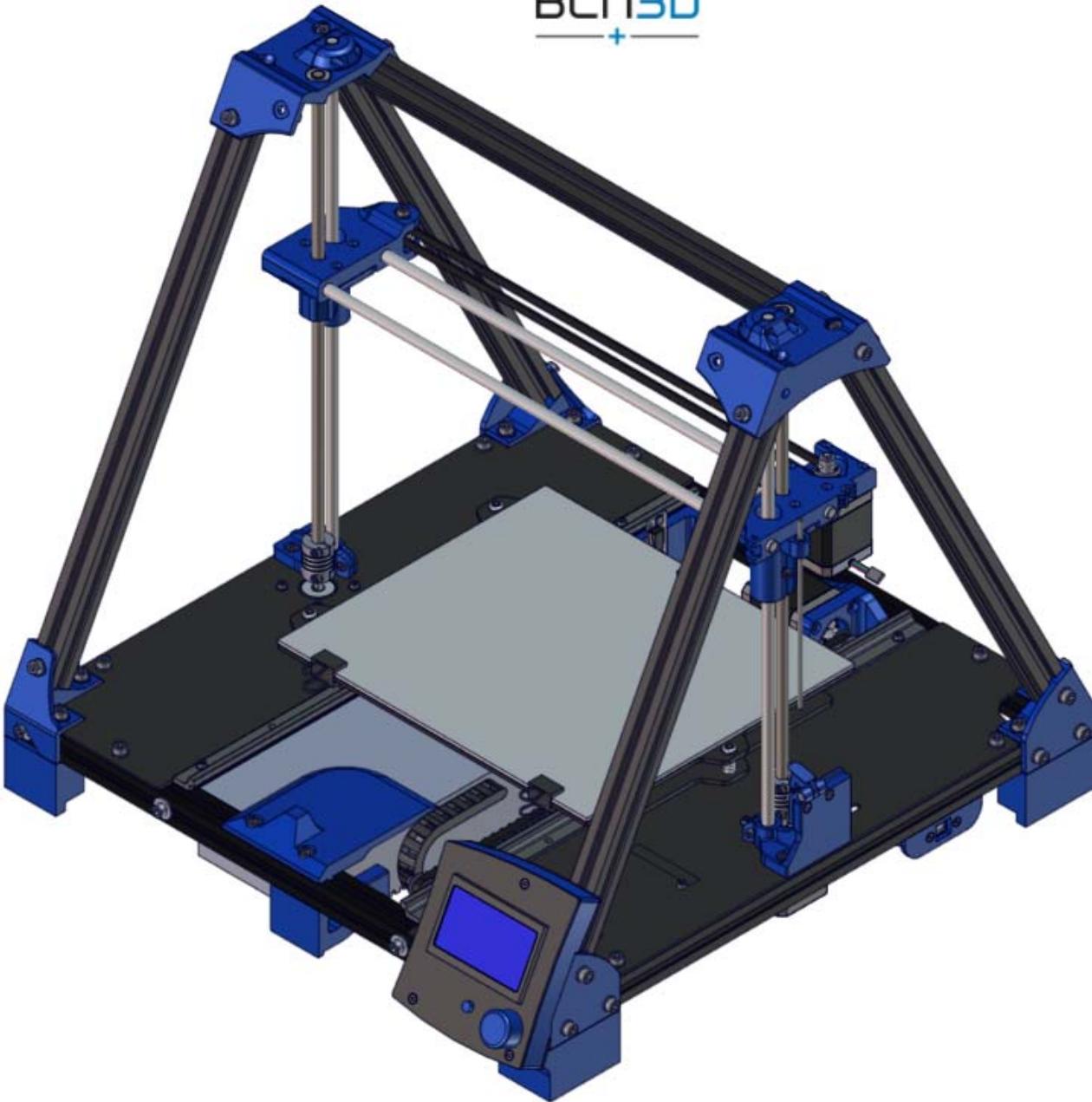
Assembly Guide





PASTE EXTRUDER

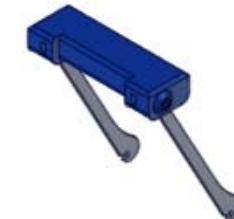
Assembly Guide



Extruder body



Plunguer



Braces



Carriage

Changes in the printer

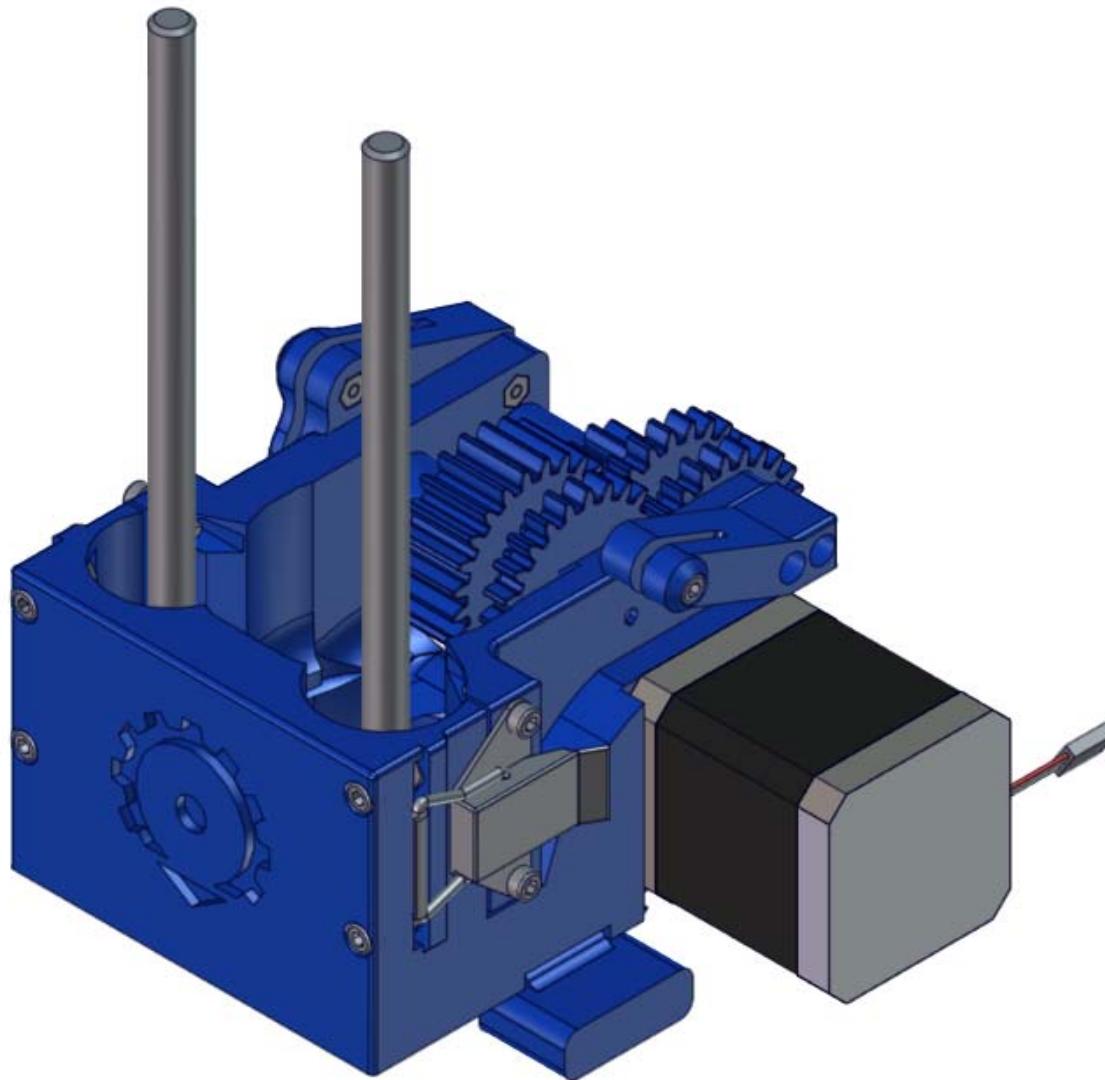
Assembly of the modules

Load of the firmware



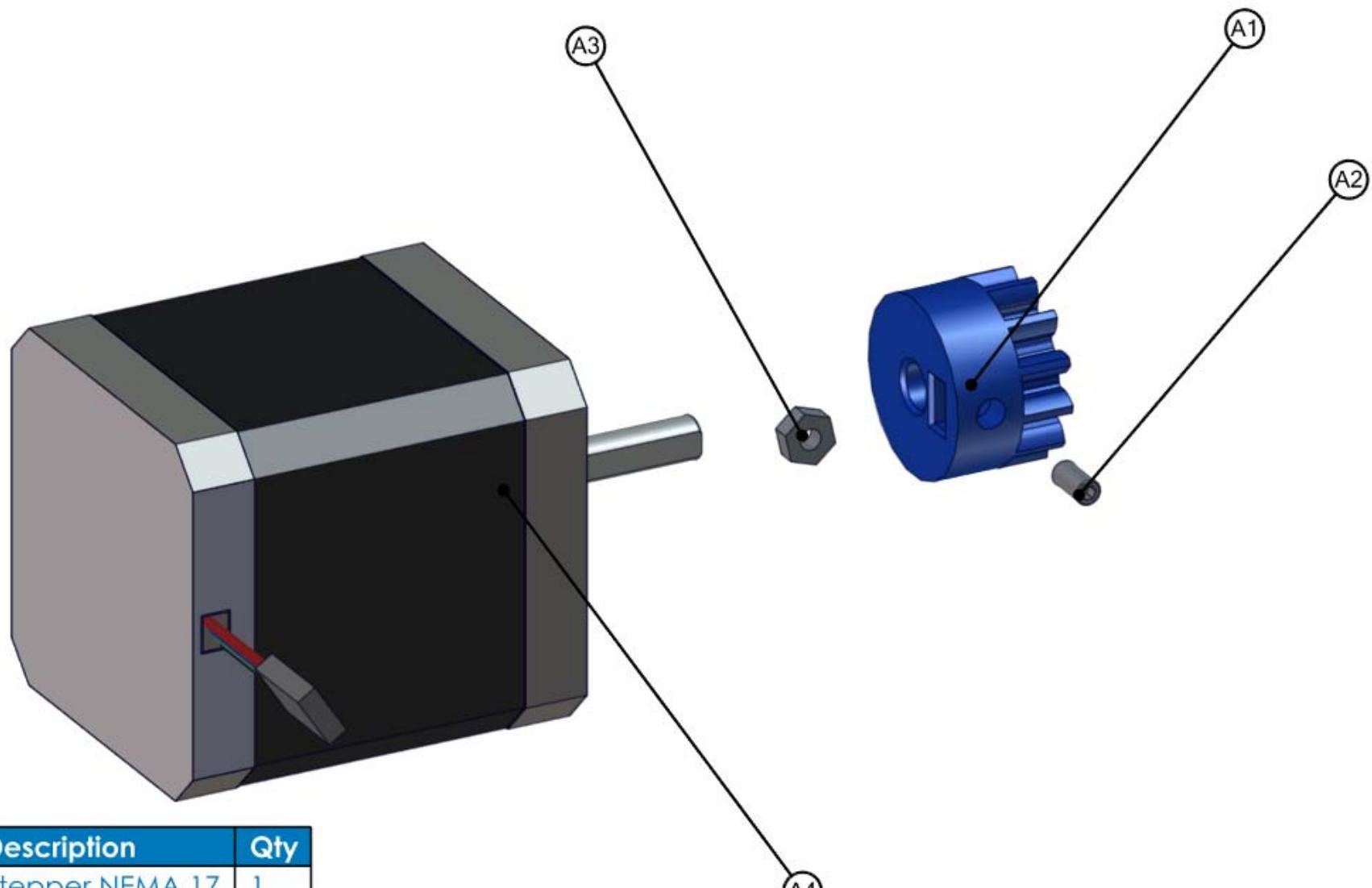
PASTE EXTRUDER

Extruder body



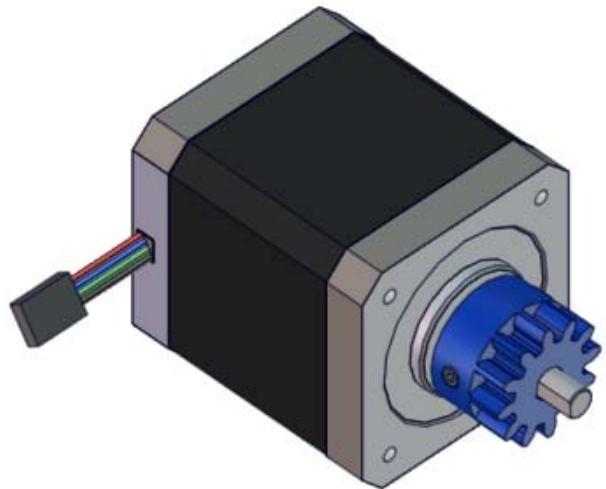
Main View

1

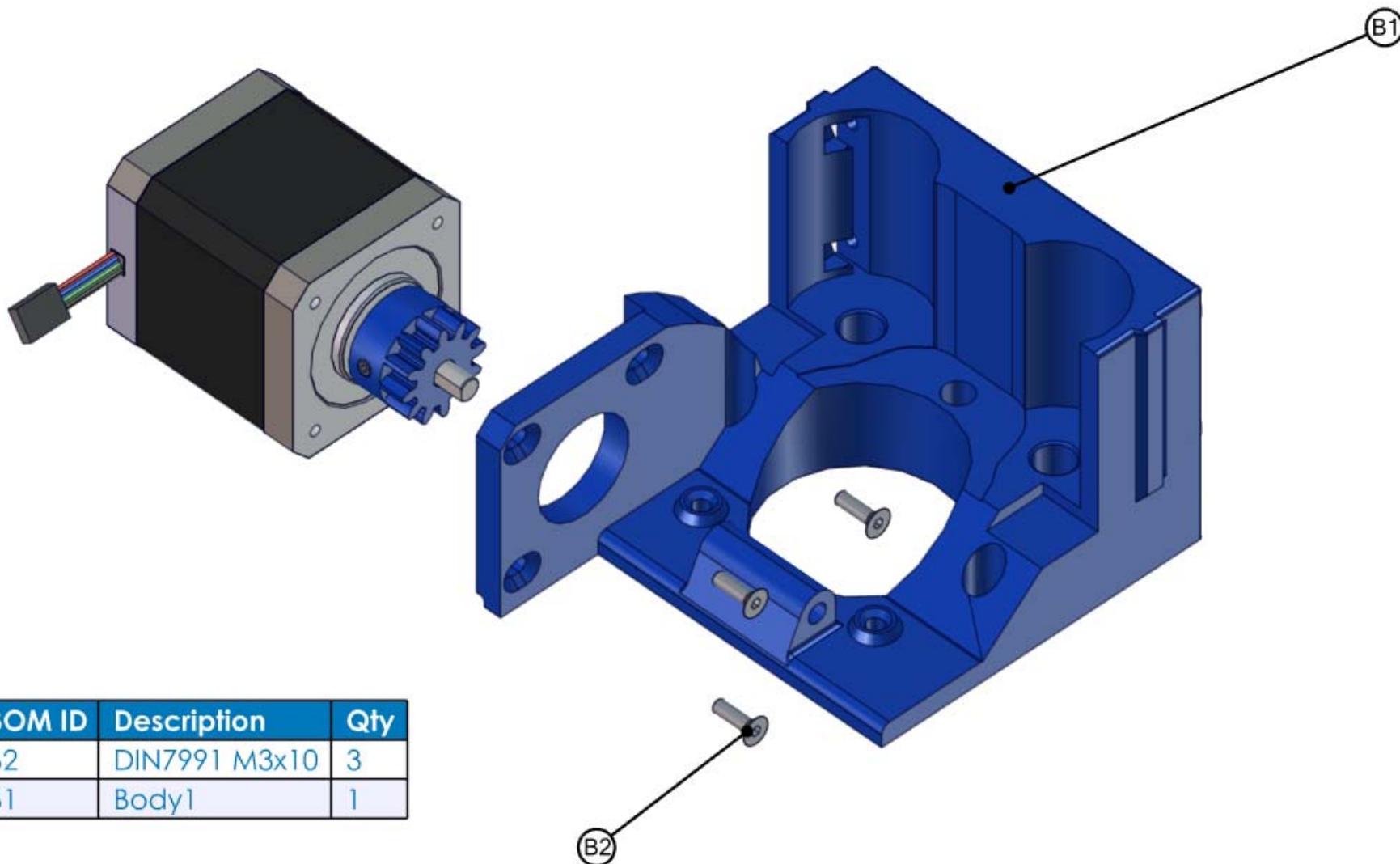


BOM ID	Description	Qty
A4	Stepper NEMA 17	1
A1	Small Gear Paste	1
A3	DIN934 M3	1
A2	DIN913 M3x6	1

2

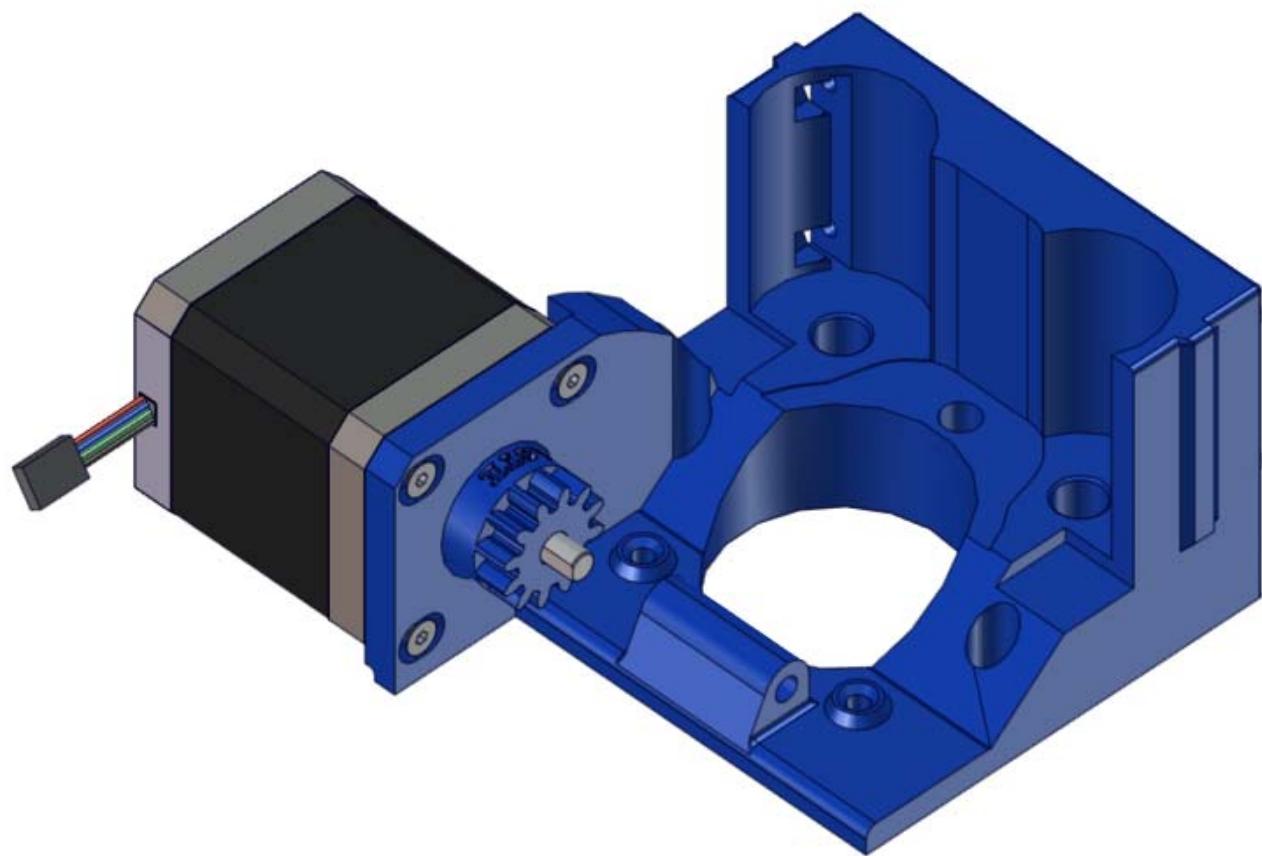


3

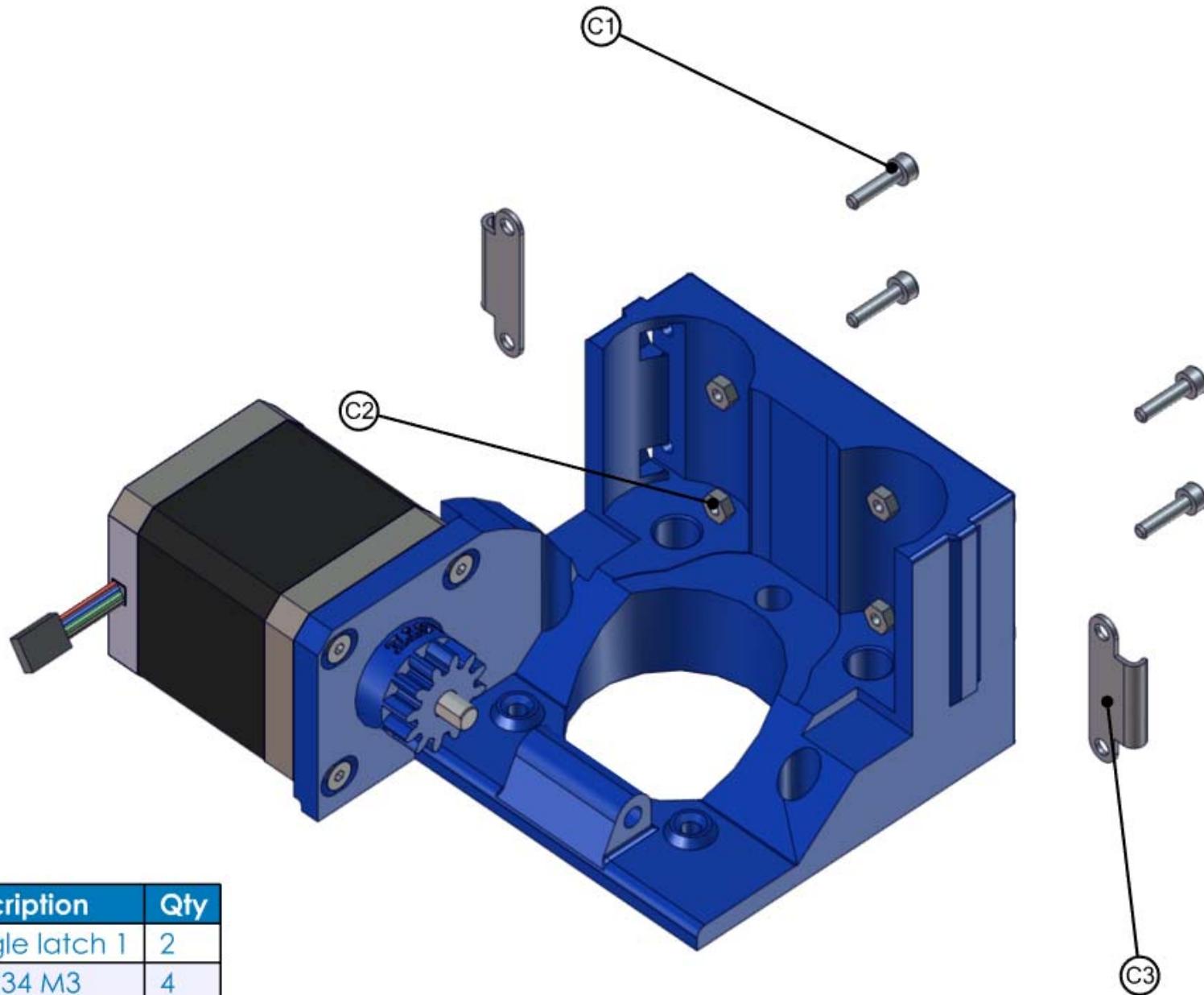


BOM ID	Description	Qty
B2	DIN7991 M3x10	3
B1	Body1	1

4

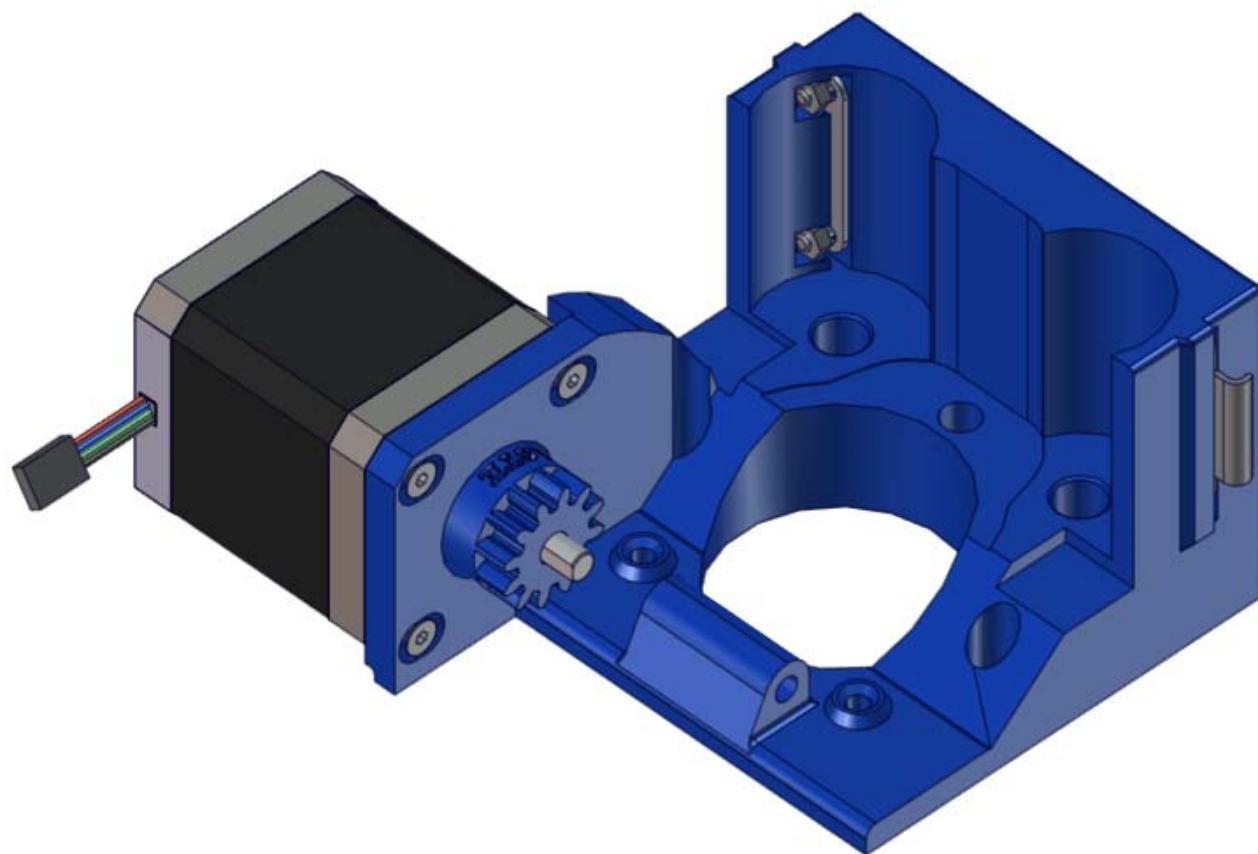


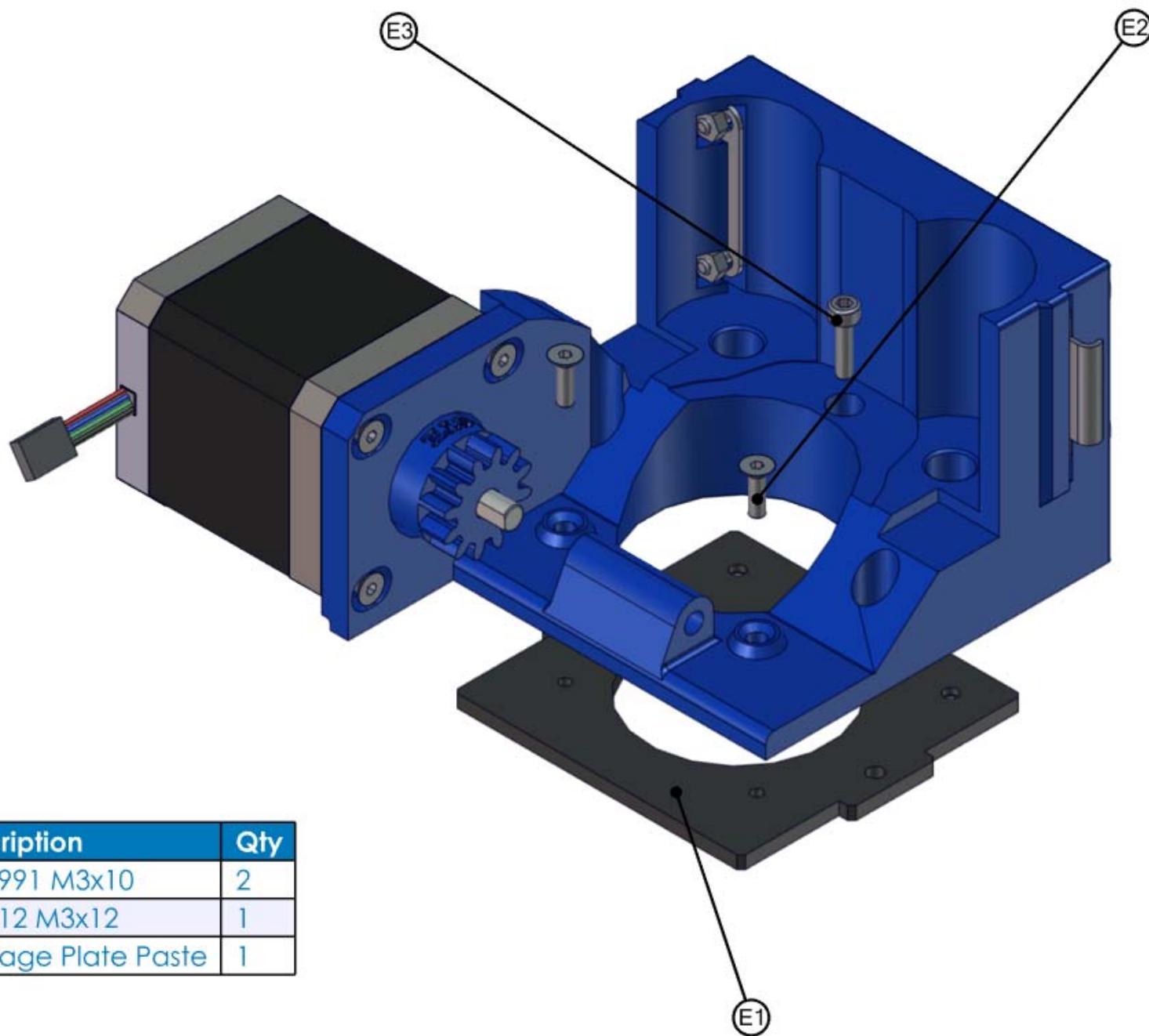
5



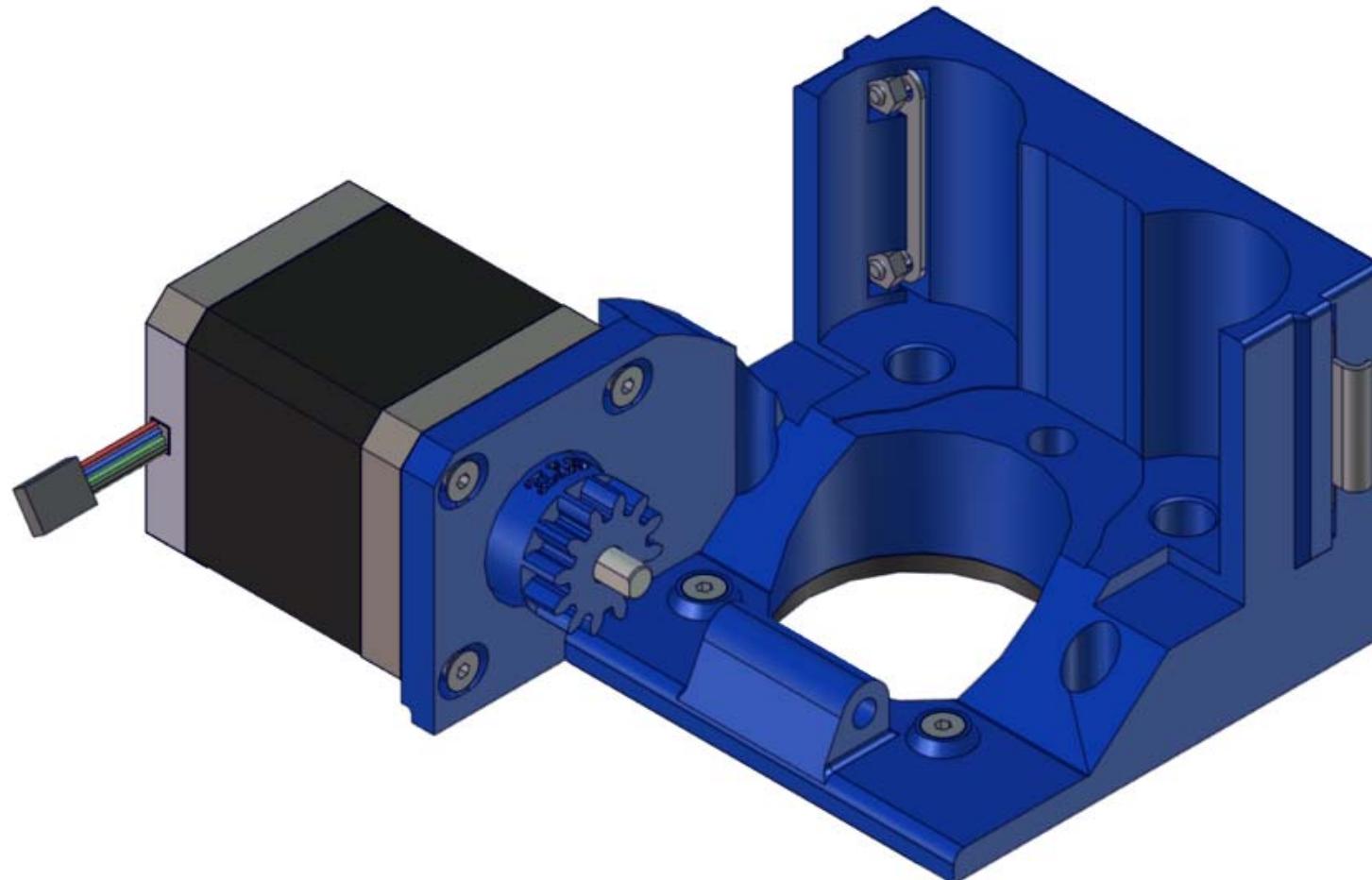
BOM ID	Description	Qty
C3	Toggle latch 1	2
C2	DIN934 M3	4
C1	DIN912 M3x12	4

6

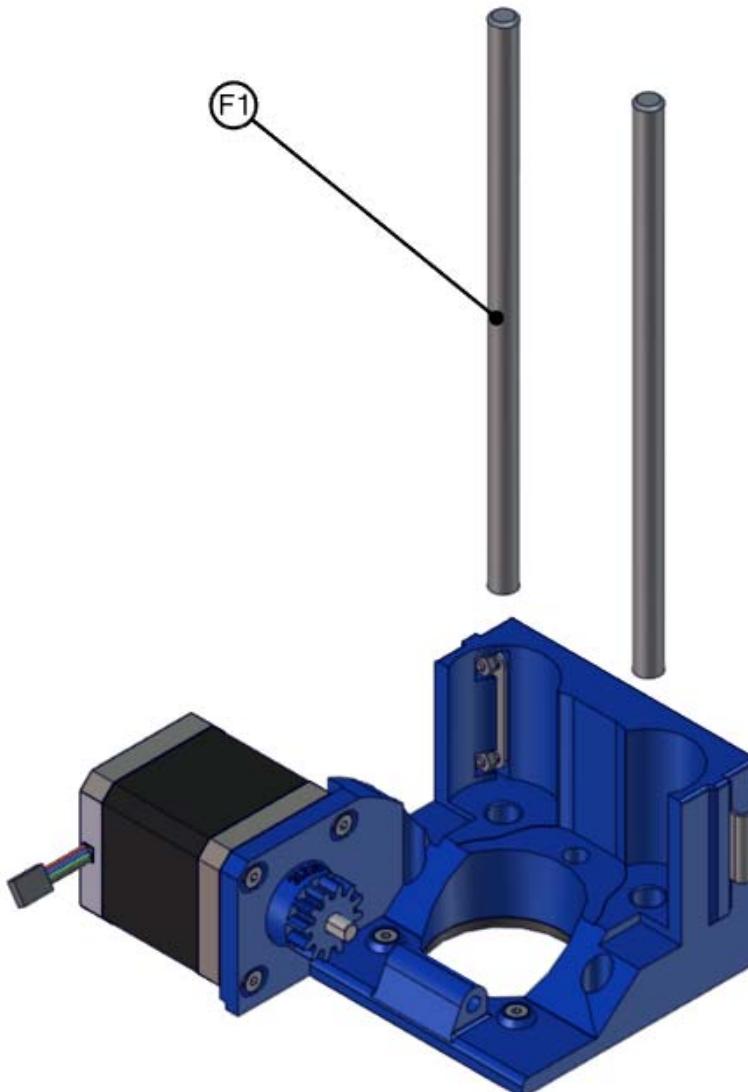




8

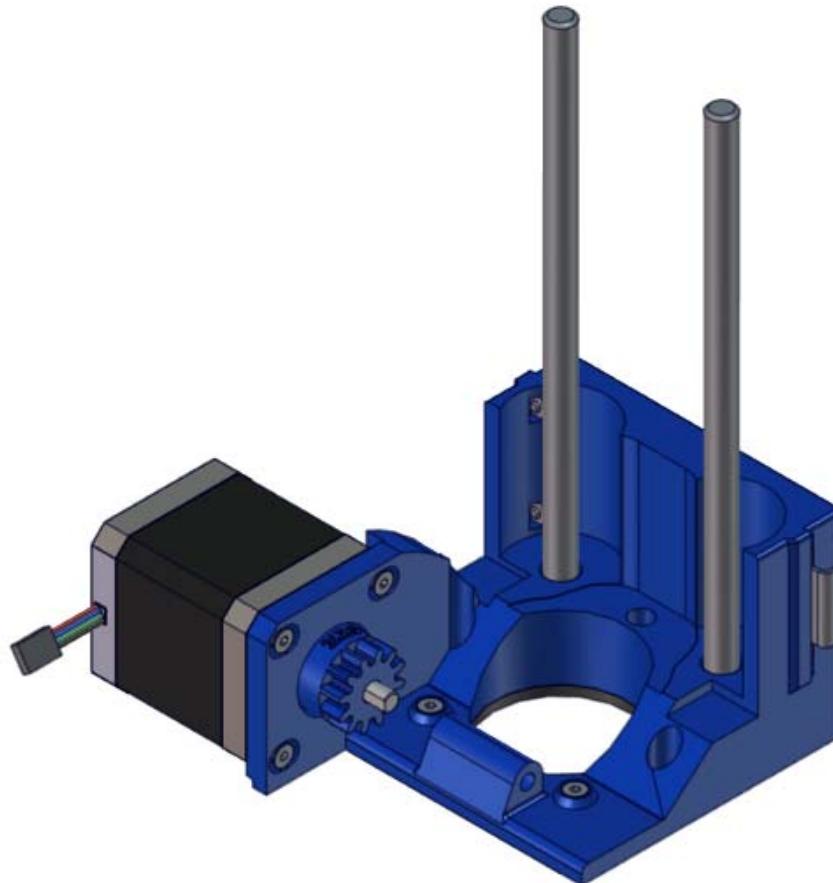


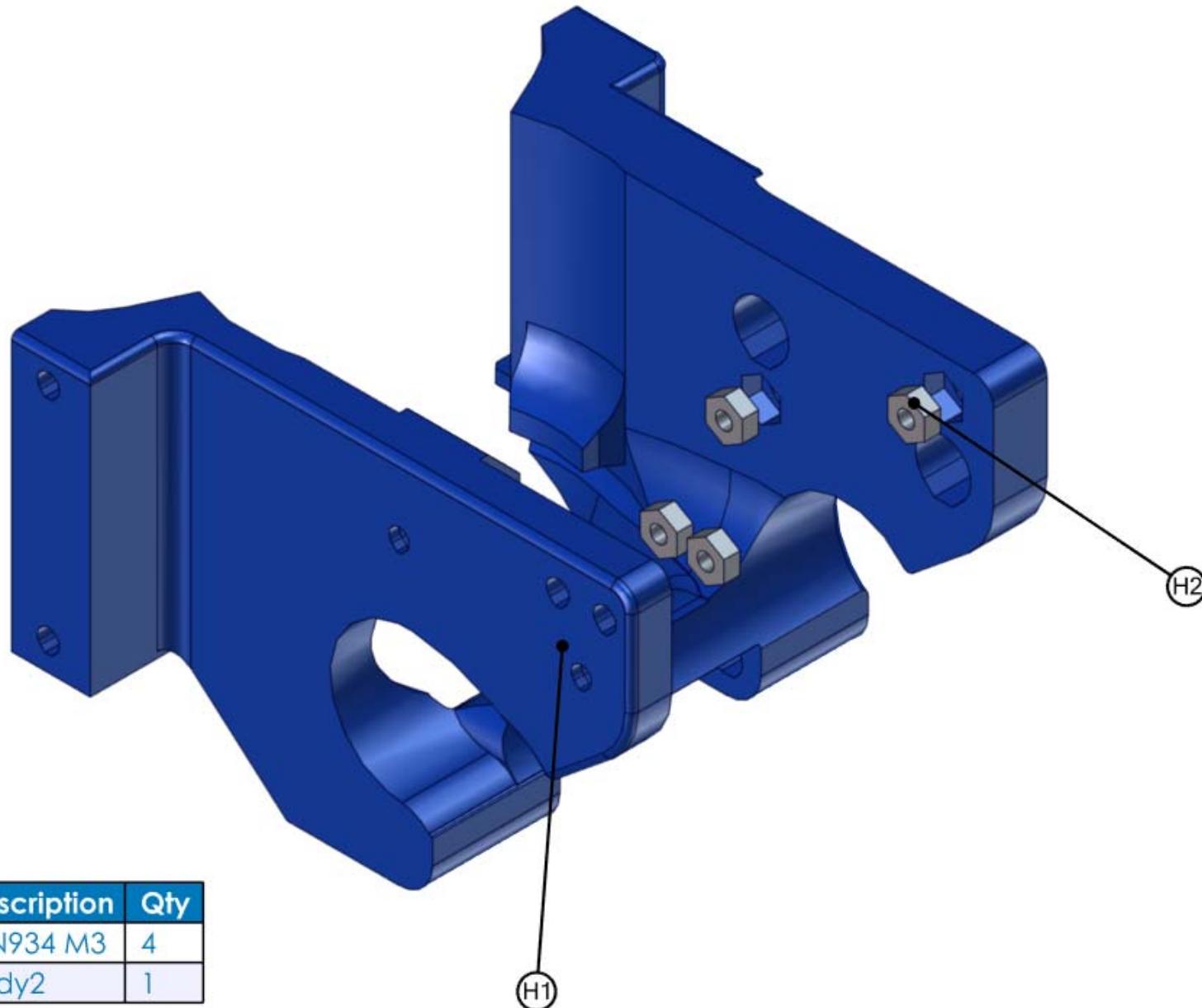
9



BOM ID	Description	Qty
F1	Guide bar	2
F2	DIN7991 M3x10	2

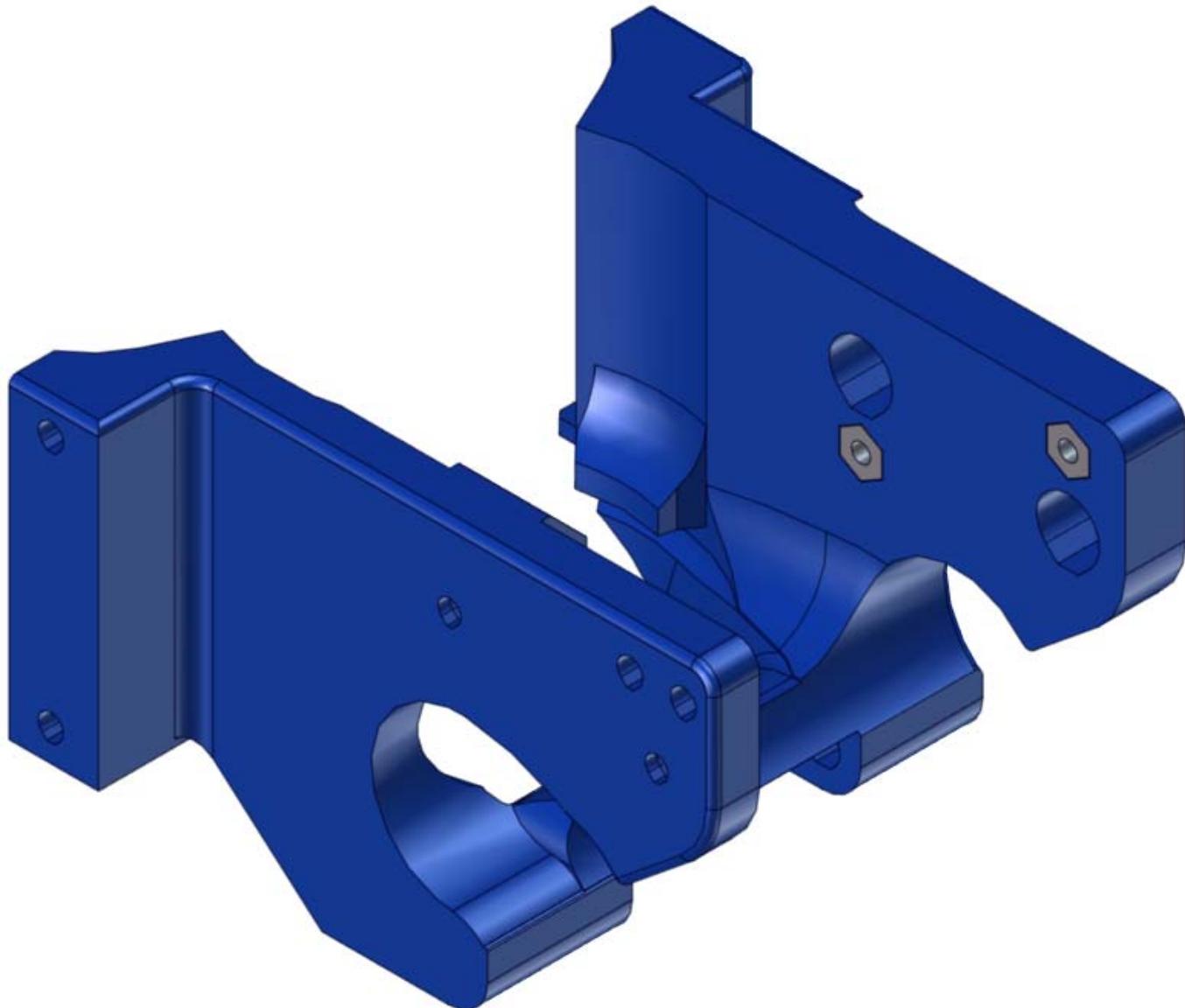
10



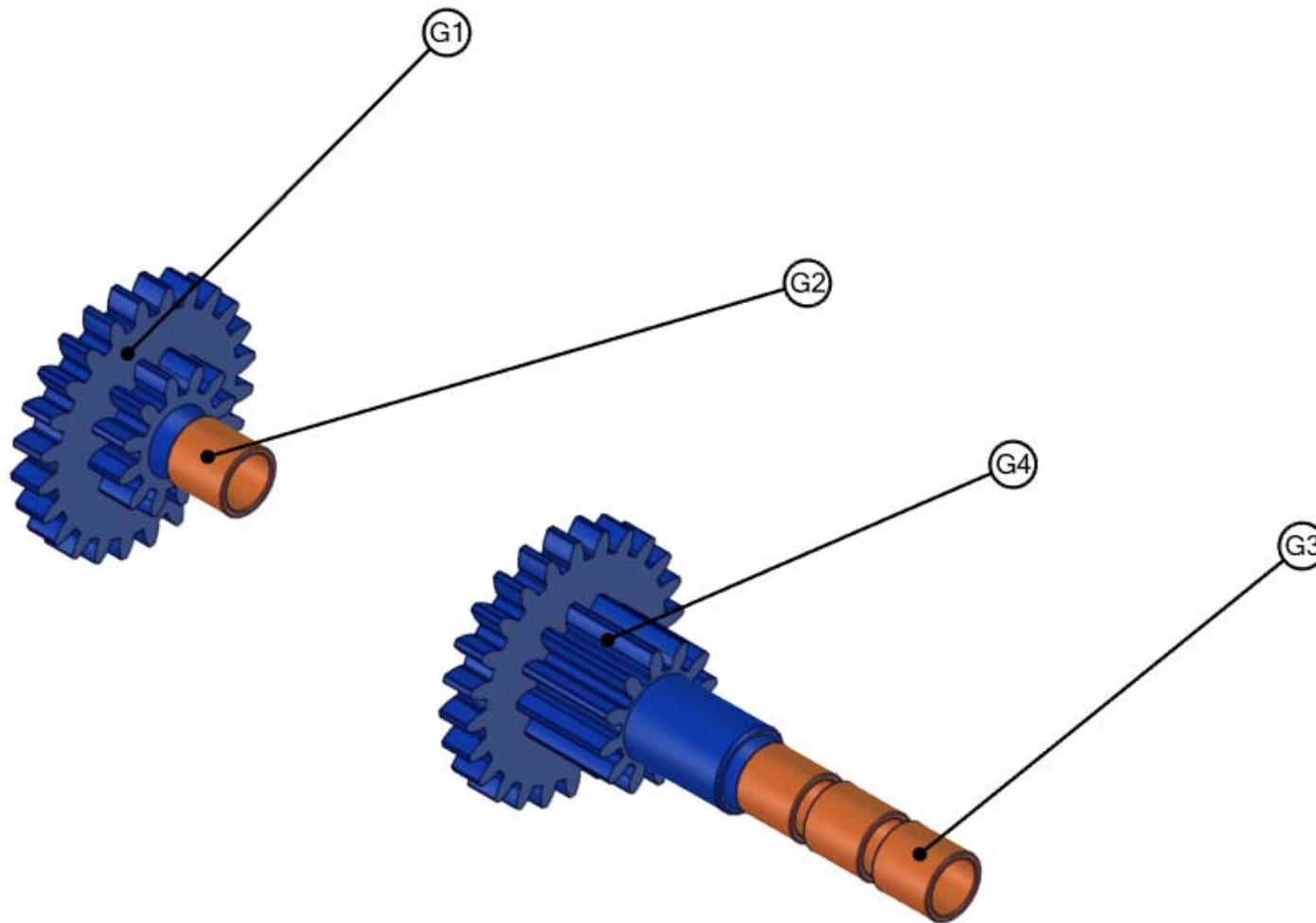


BOM ID	Description	Qty
H2	DIN934 M3	4
H1	Body2	1

12

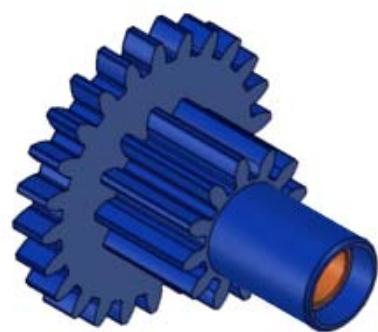
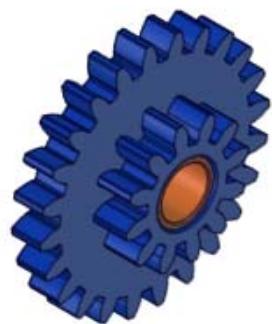


13

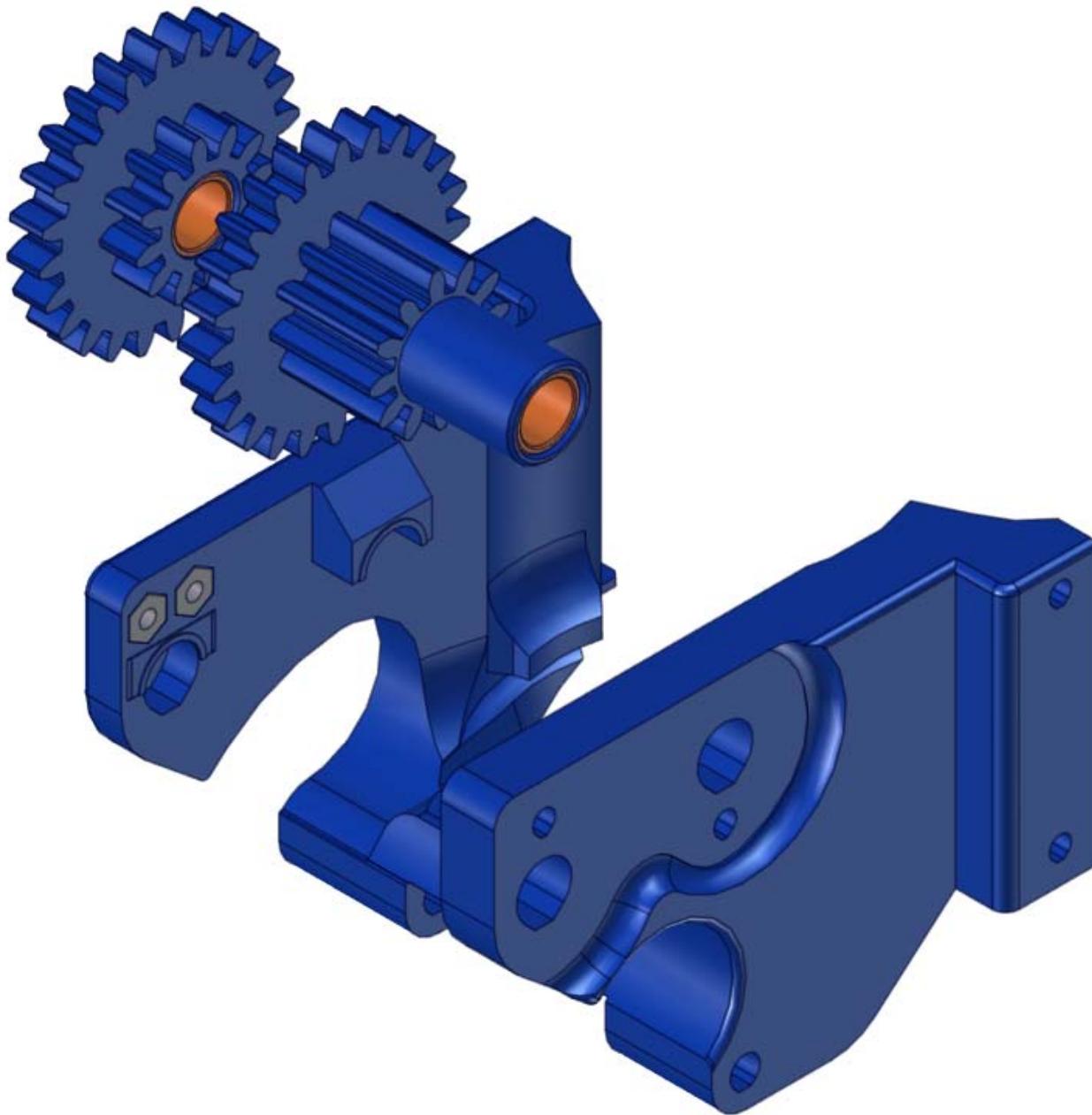


BOM ID	Description	Qty
G3	Selfoil A-8-10	2
G2	Selfoil A-8-10	2
G4	Reduction gear 2	1
G1	Reduction gear 1	1

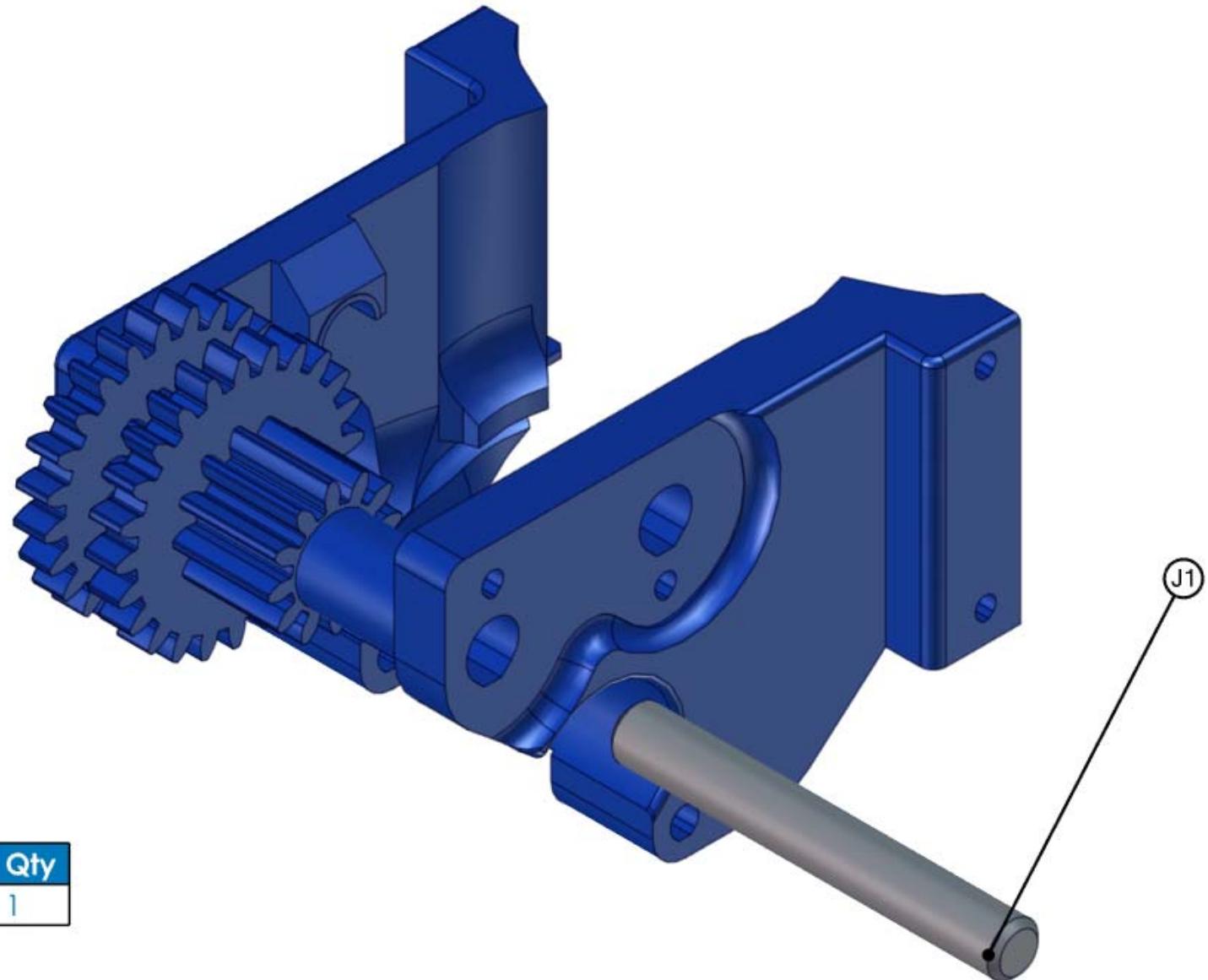
14



15

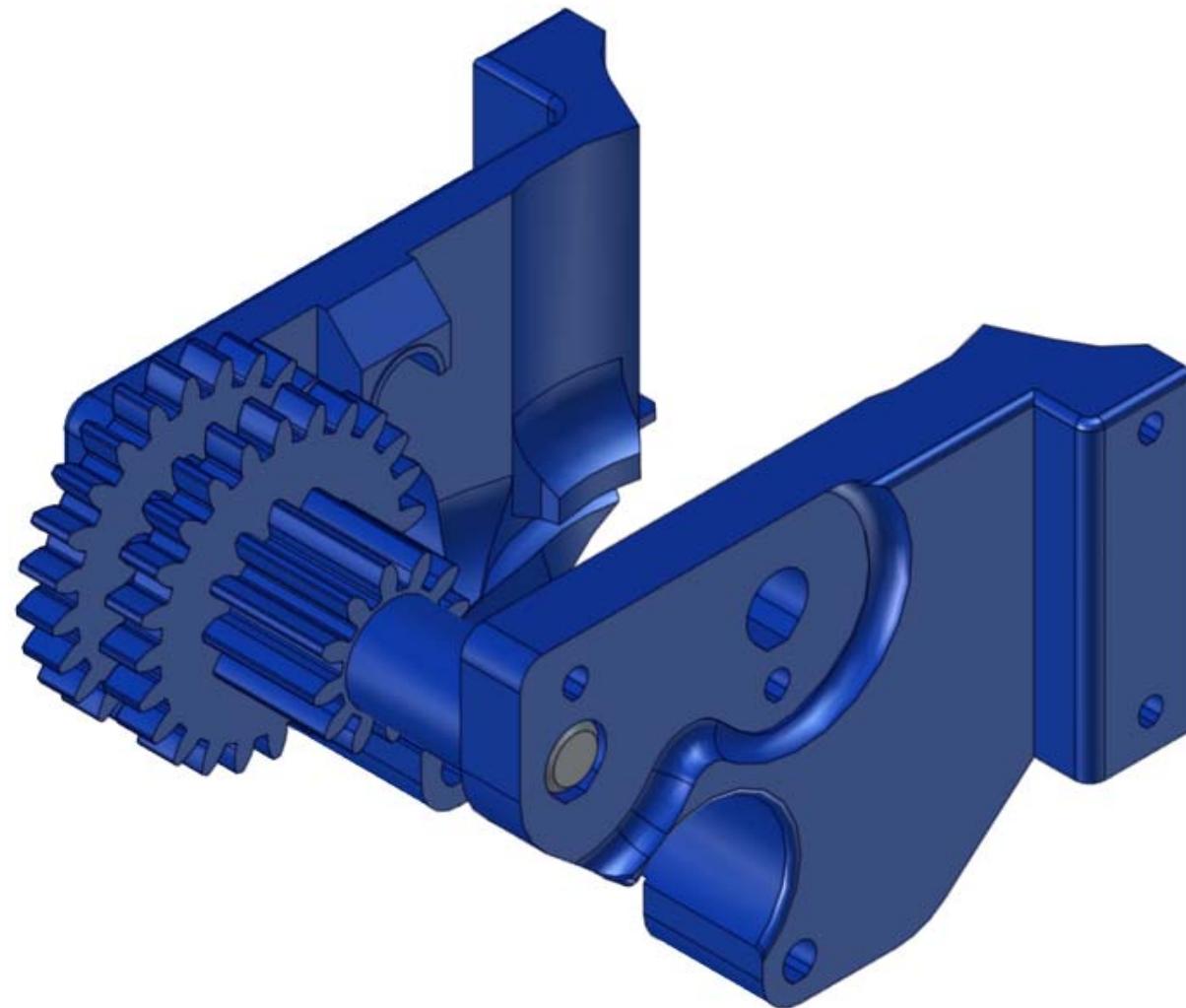


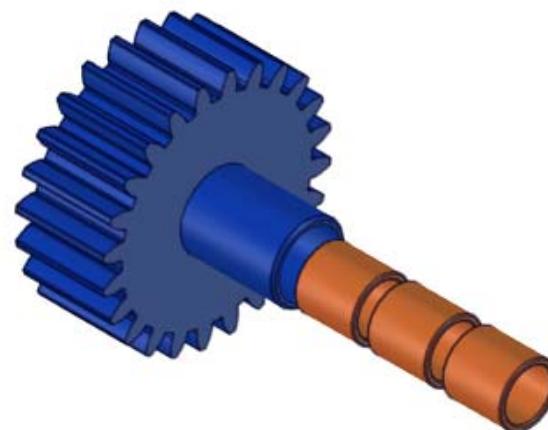
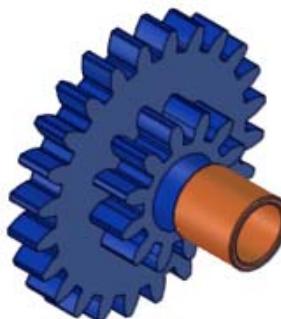
16



BOM ID	Description	Qty
J1	Shaft bar	1

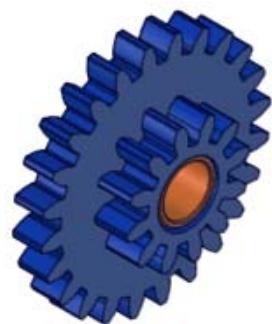
17



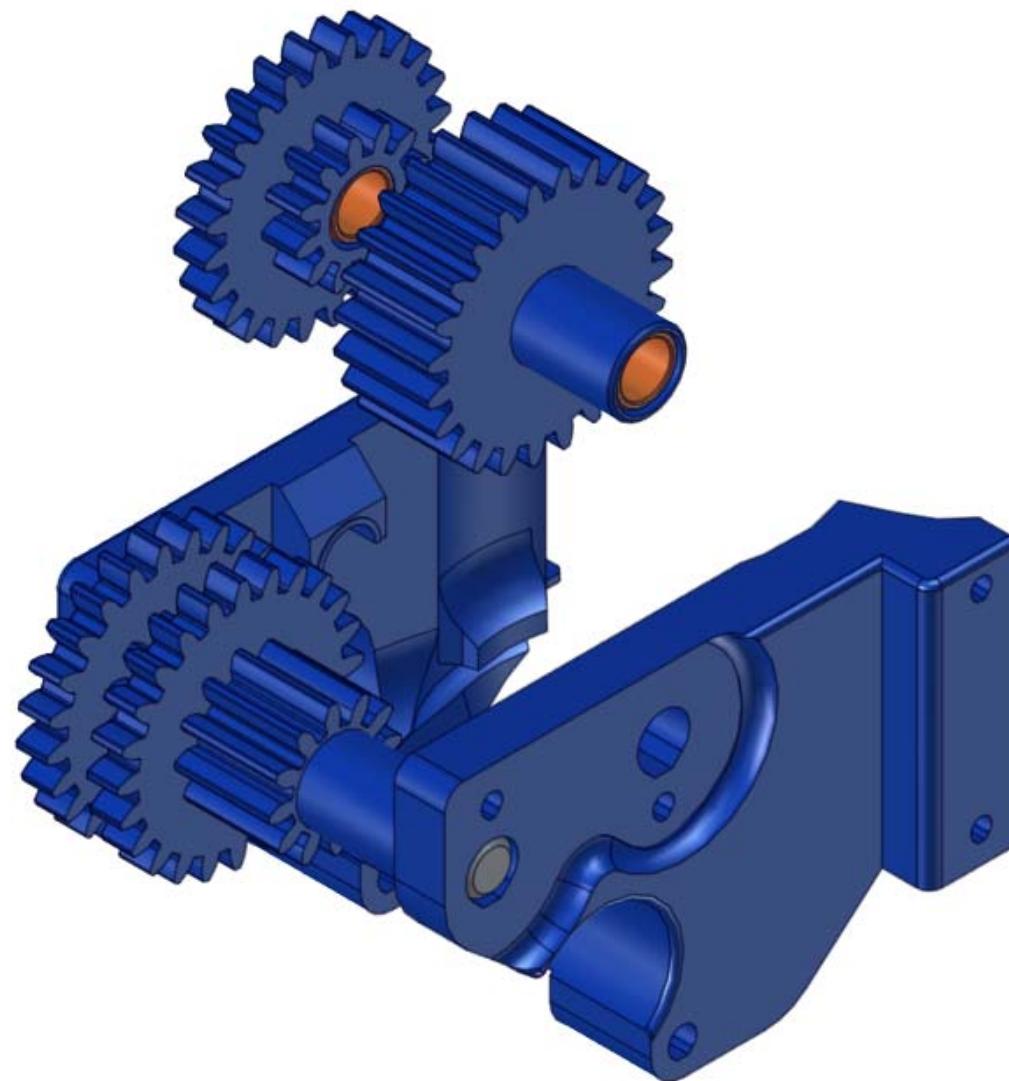


BOM ID	Description	Qty
G1	Transmission	1
G3	Selfoil A-8-10	2
G2	Selfoil A-8-10	2
G4	Reduction gear 2	1

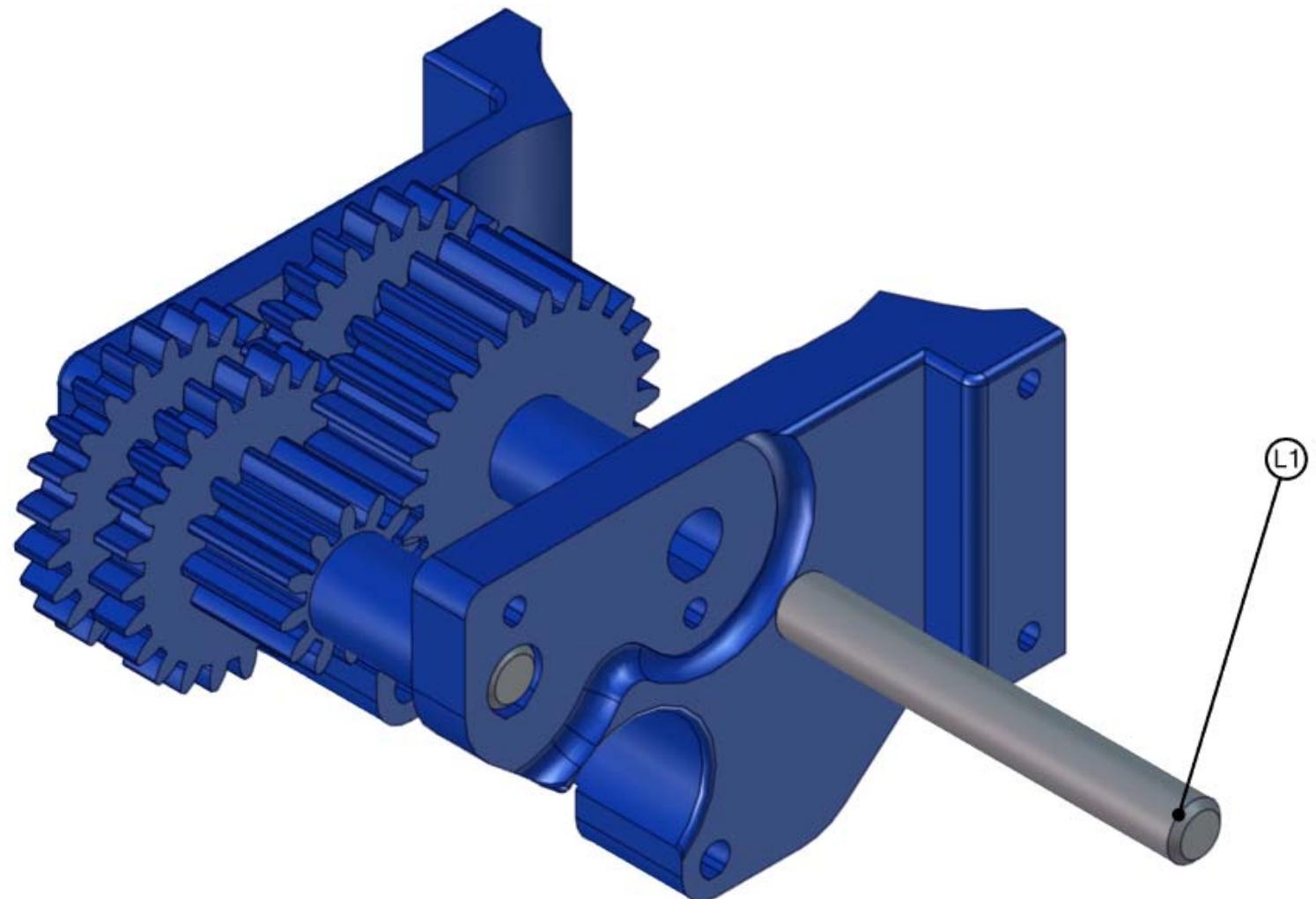
19



20

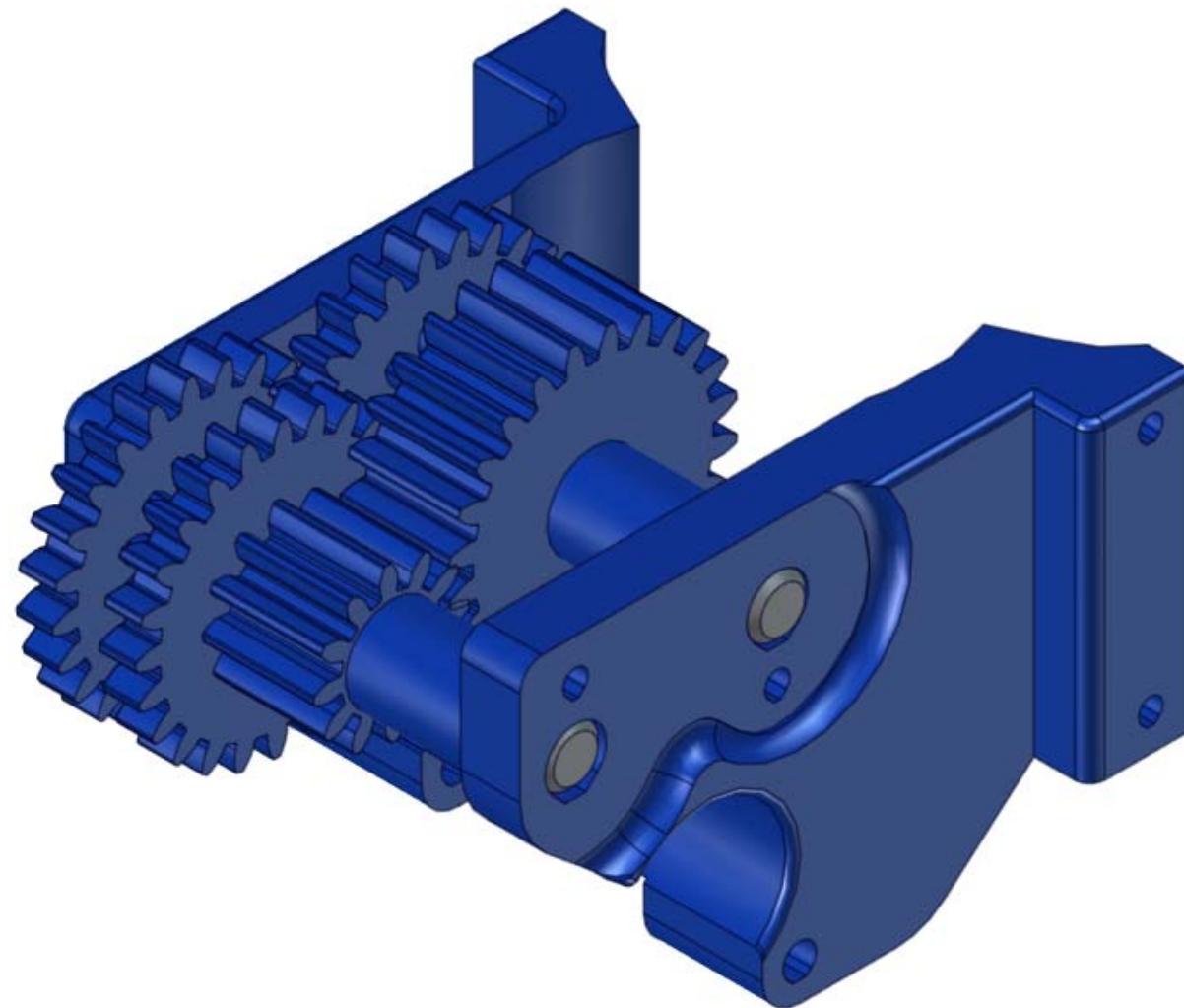


21

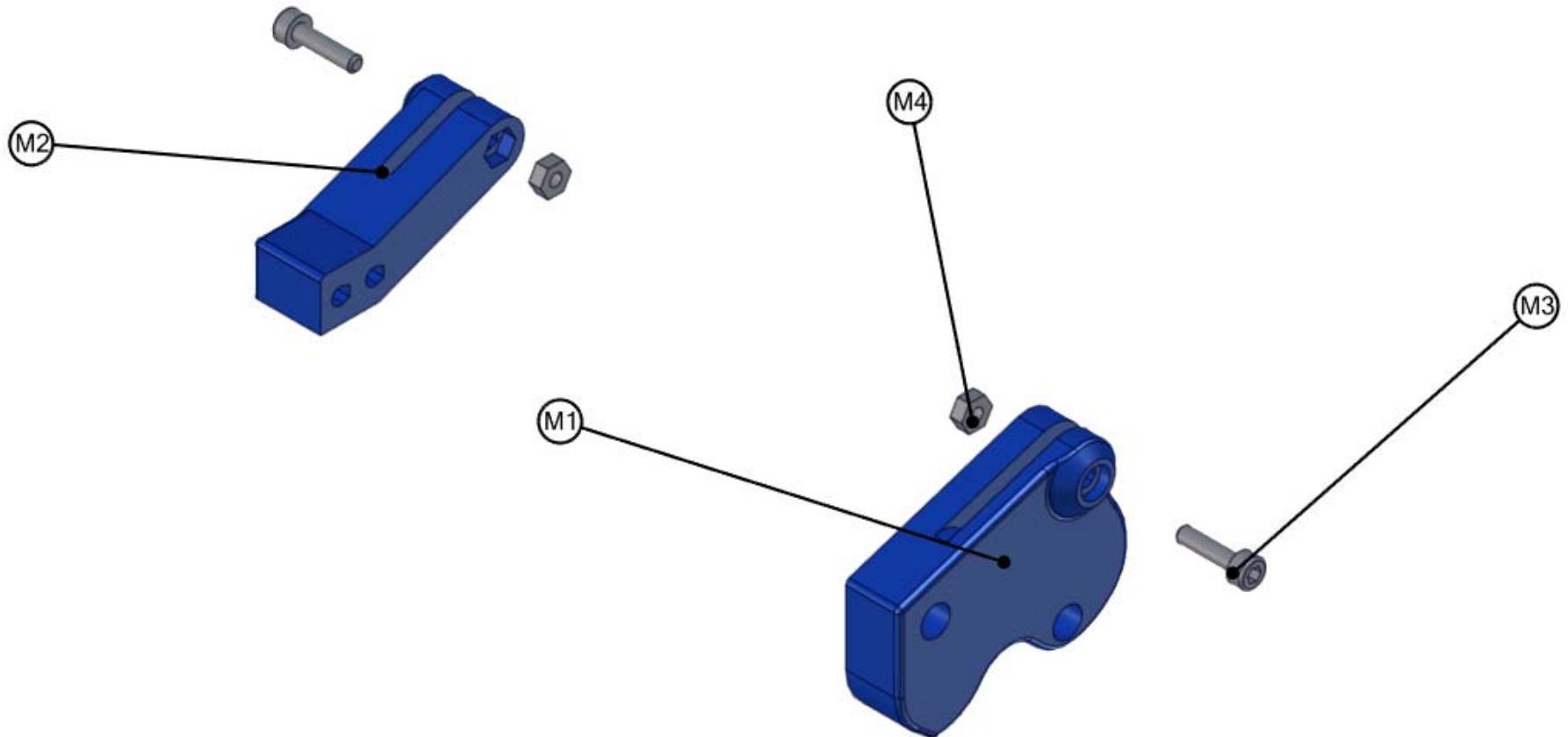


BOM ID	Description	Qty
L1	Shaft bar	1

22

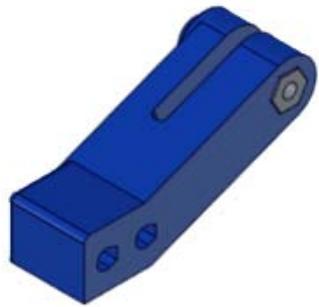


23

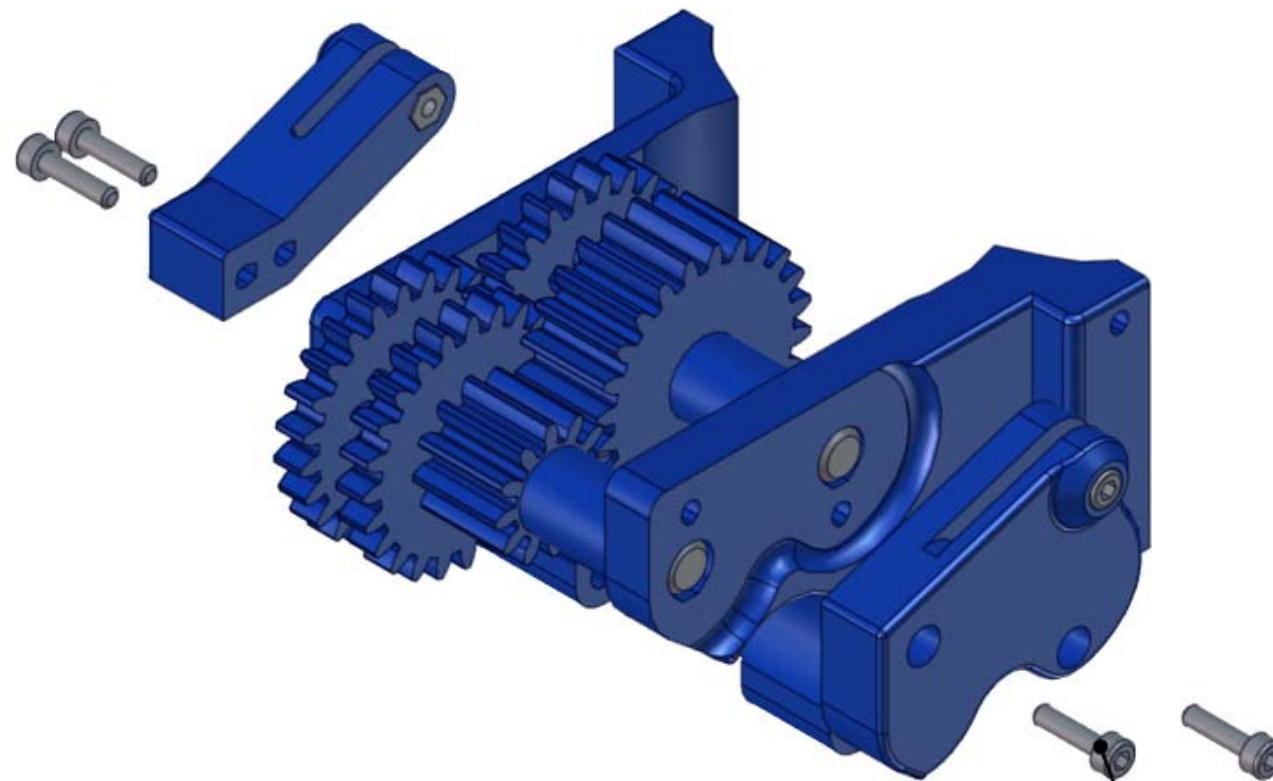


BOM ID	Description	Qty
M2	Link right	1
M1	Link Left	1
M4	DIN934 M3	2
M3	DIN912 M3x12	2

24



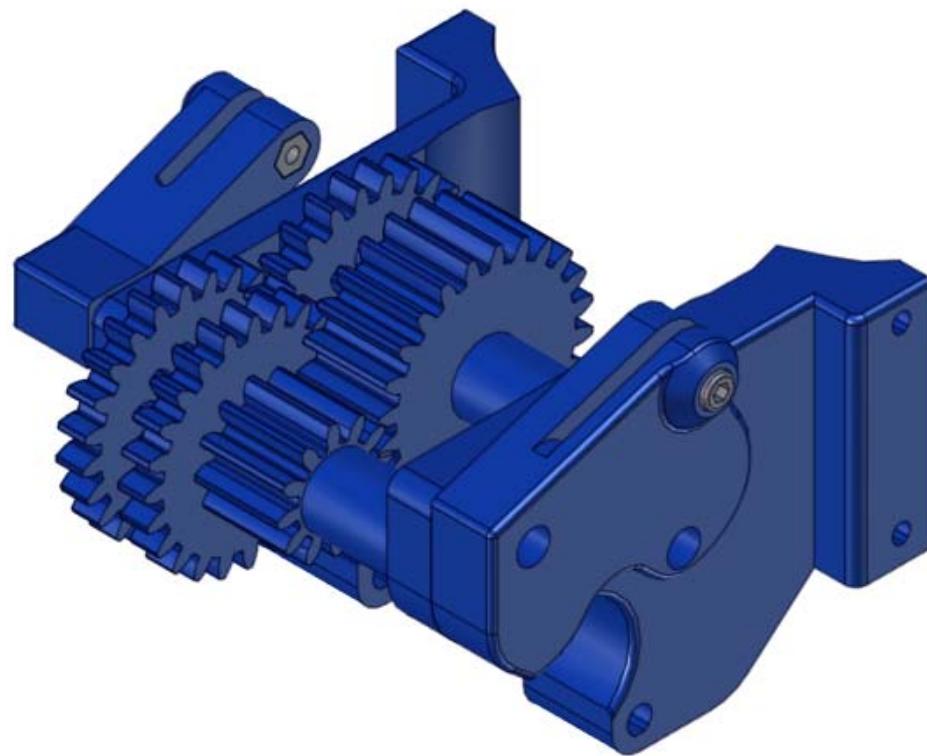
25

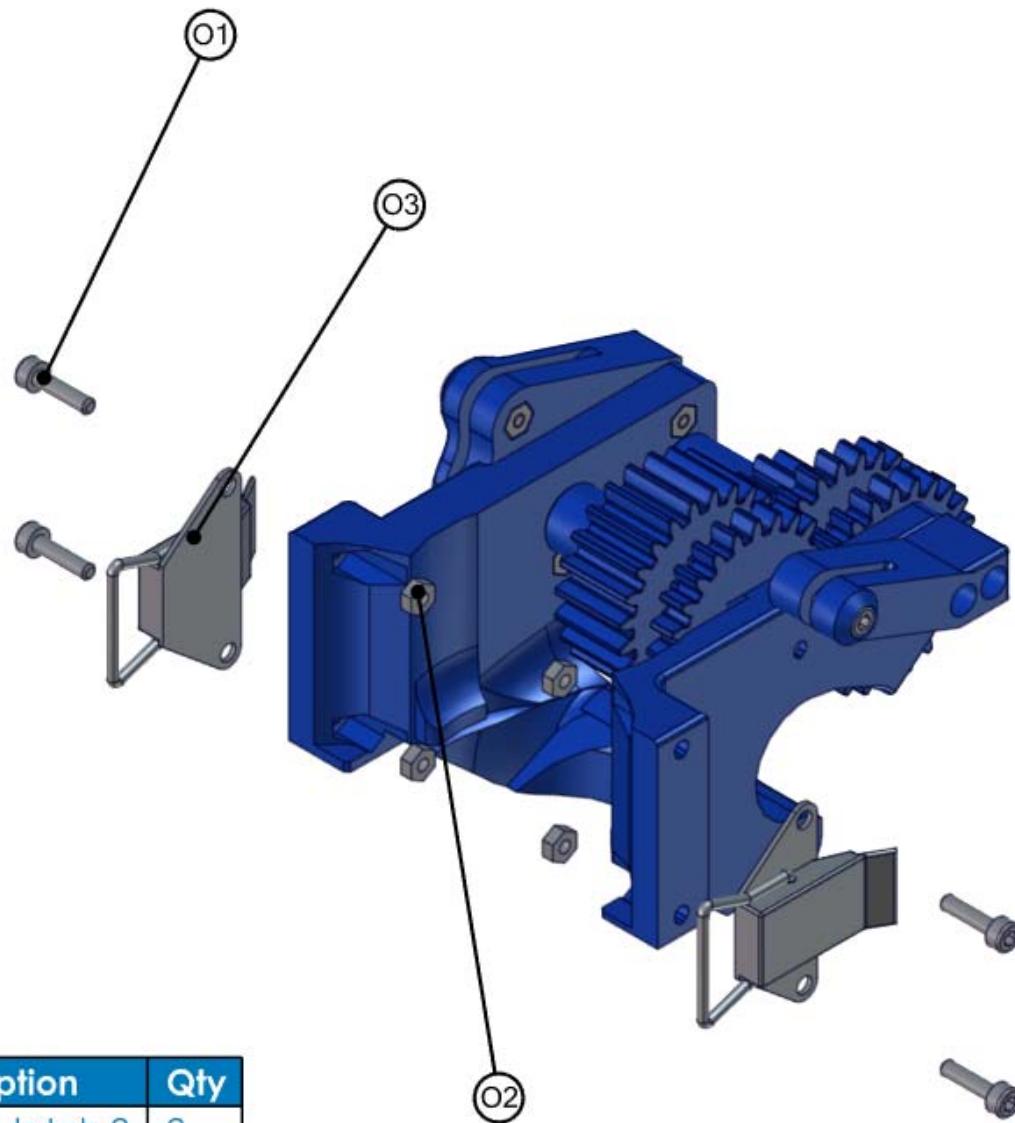


BOM ID	Description	Qty
N1	DIN912 M3x12	4

(N1)

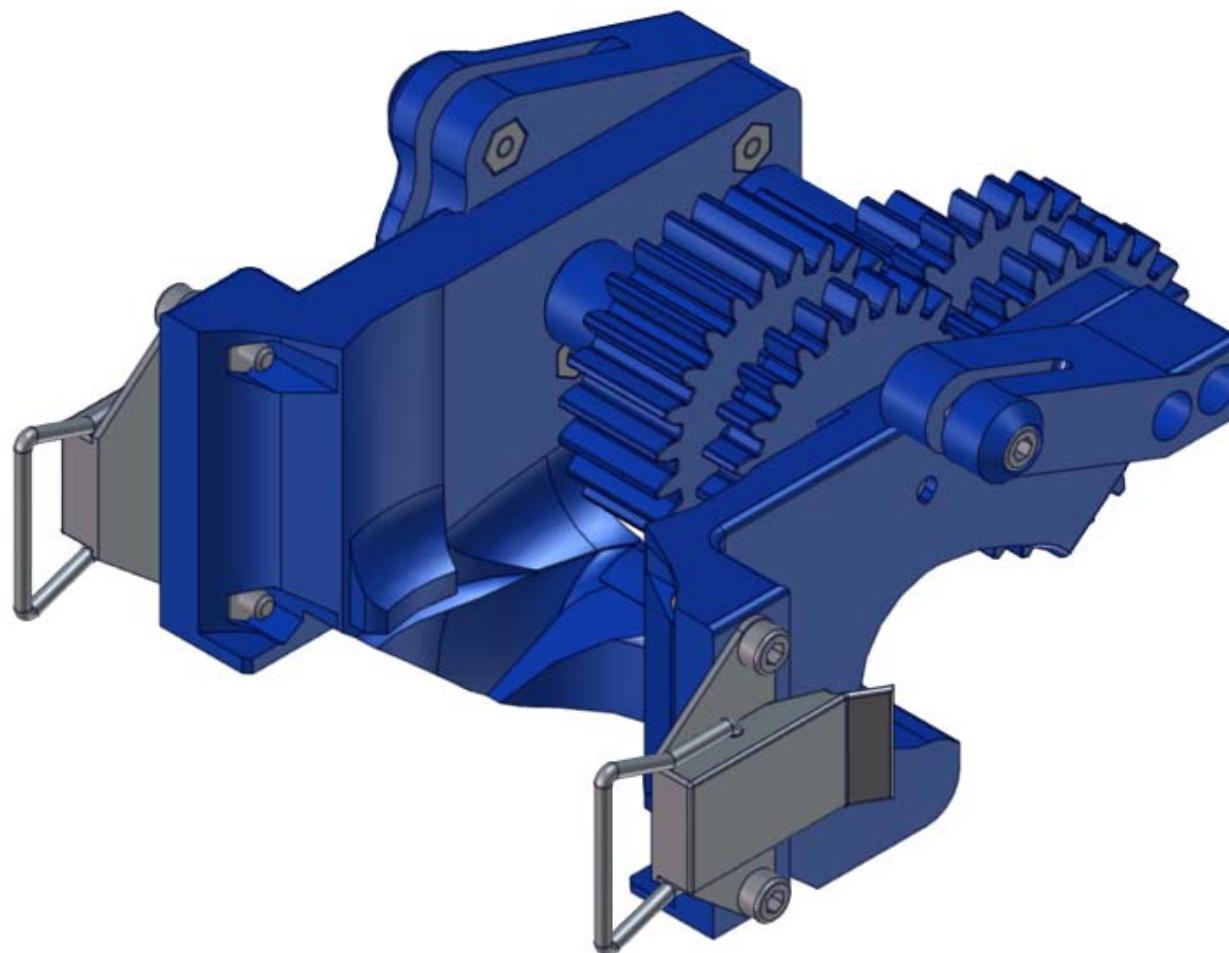
26



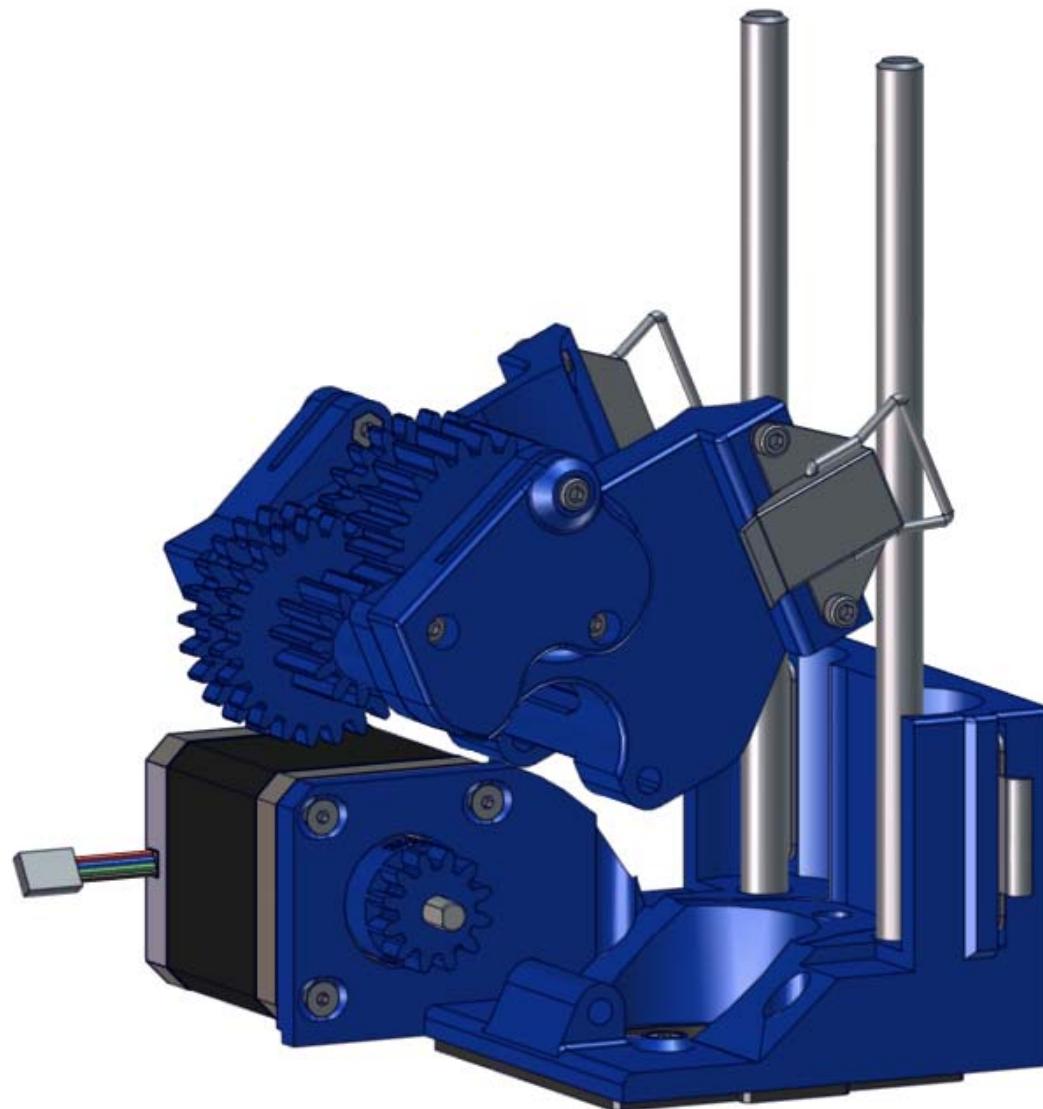


BOM ID	Description	Qty
O3	Toggle latch 2	2
O2	DIN934 M3	4
O1	DIN912 M3x12	4

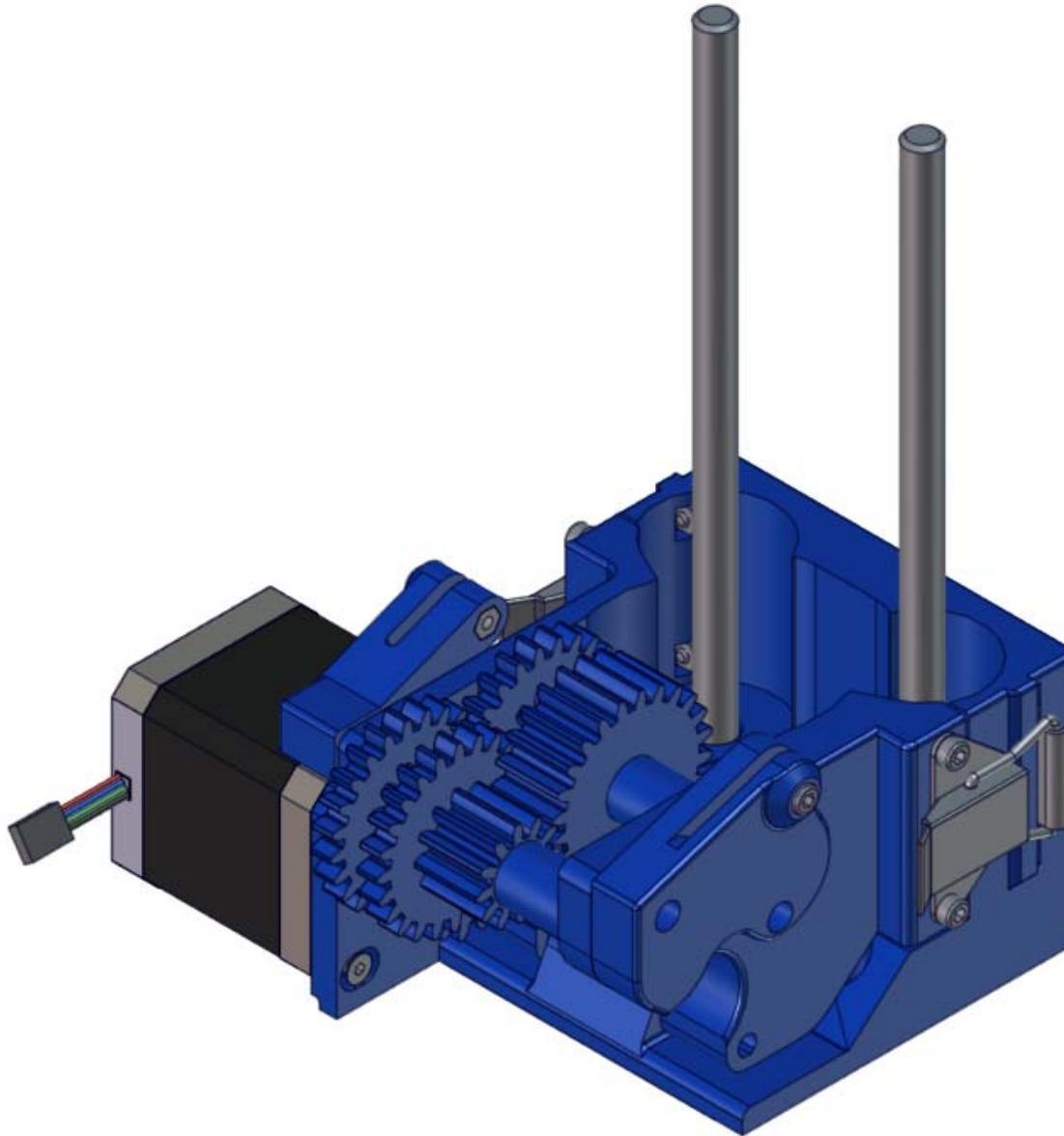
28



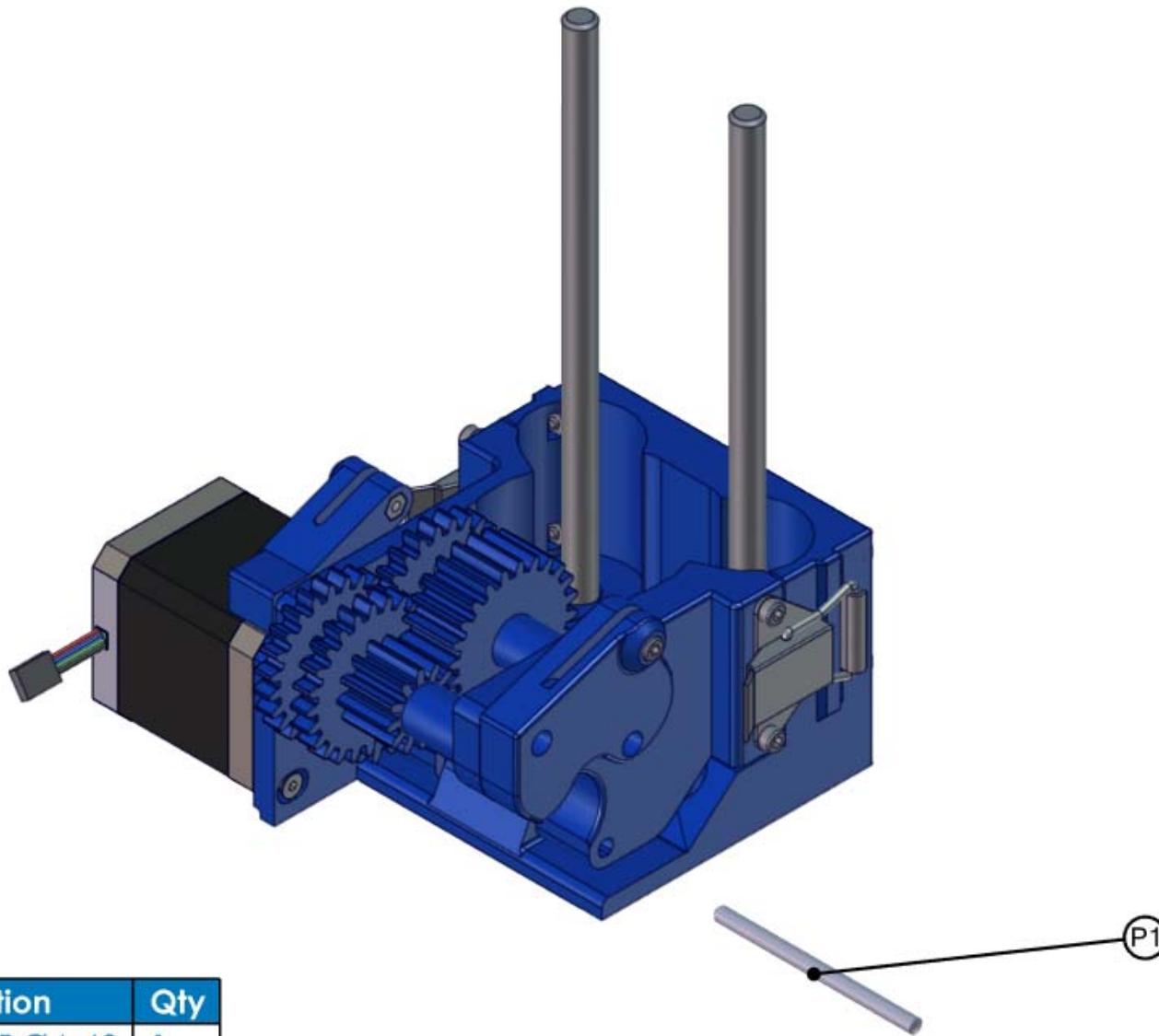
29



30

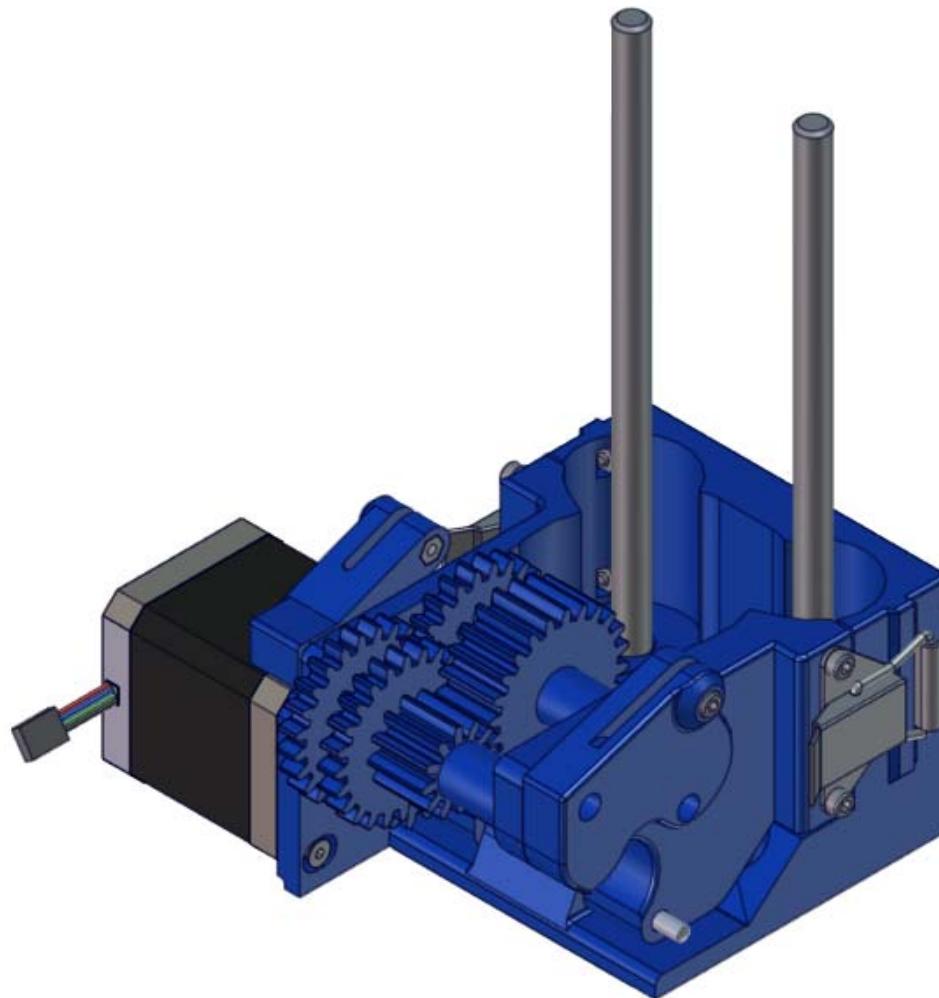


31

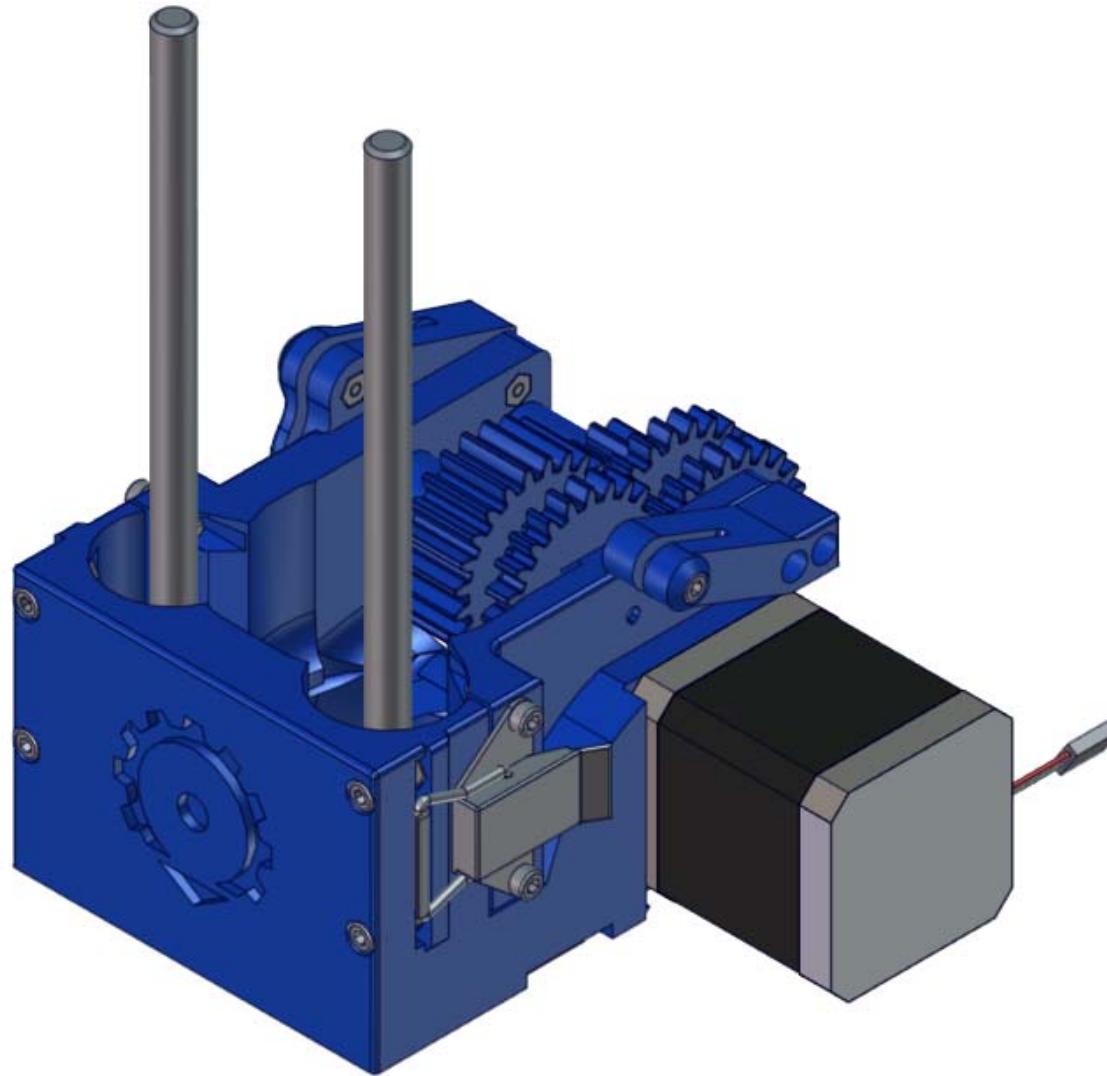


BOM ID	Description	Qty
P1	DIN 6325 Ø4x60	1

32



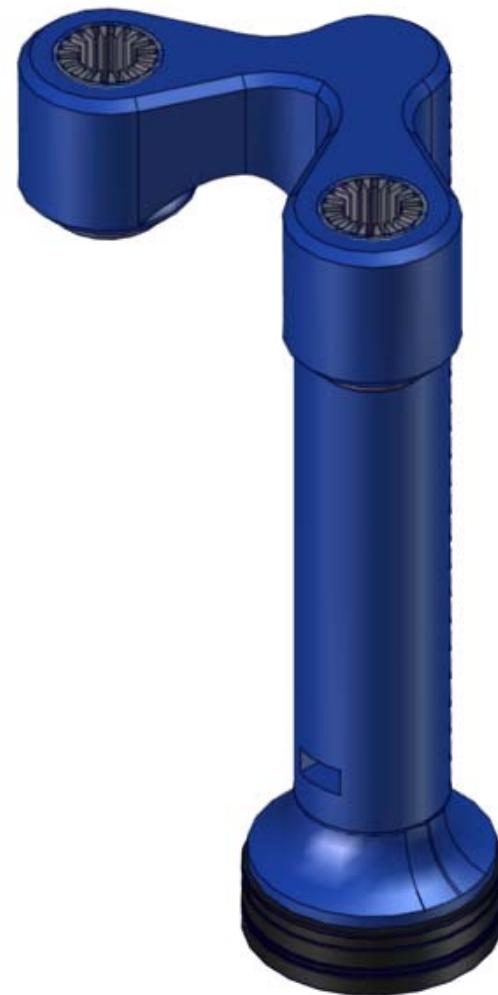
33



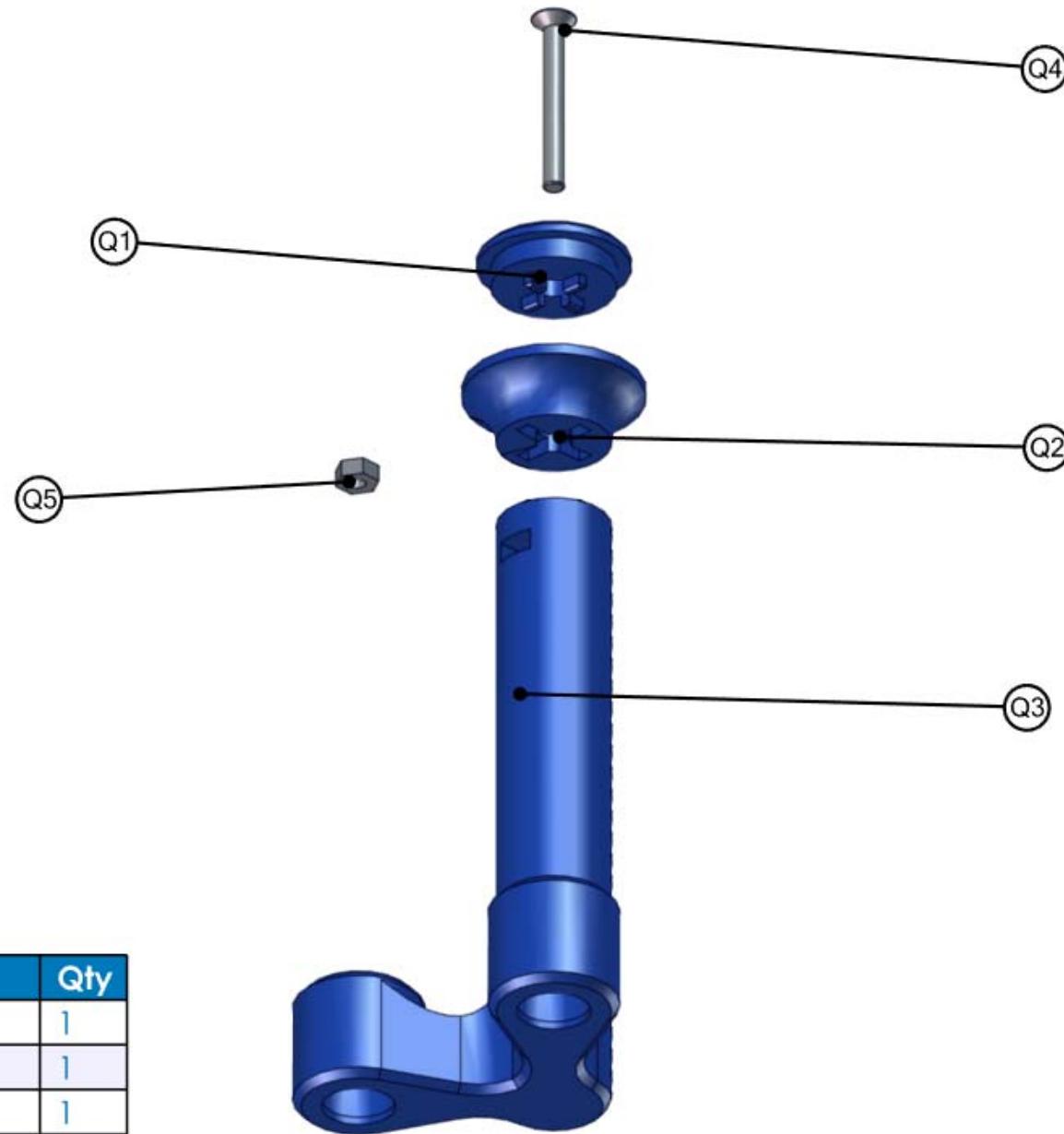


PASTE EXTRUDER

Plunger

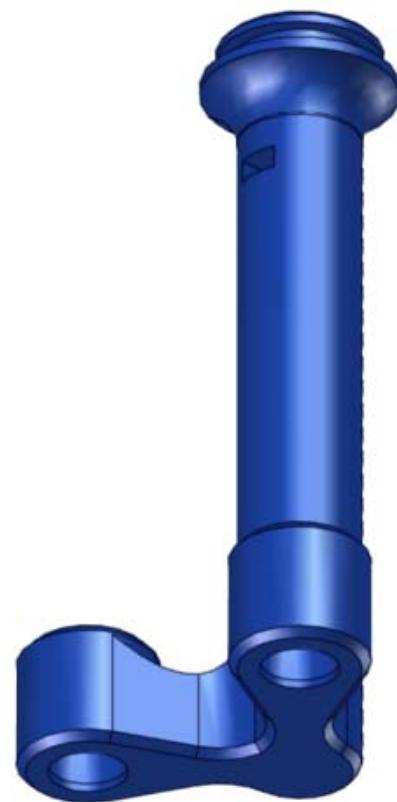


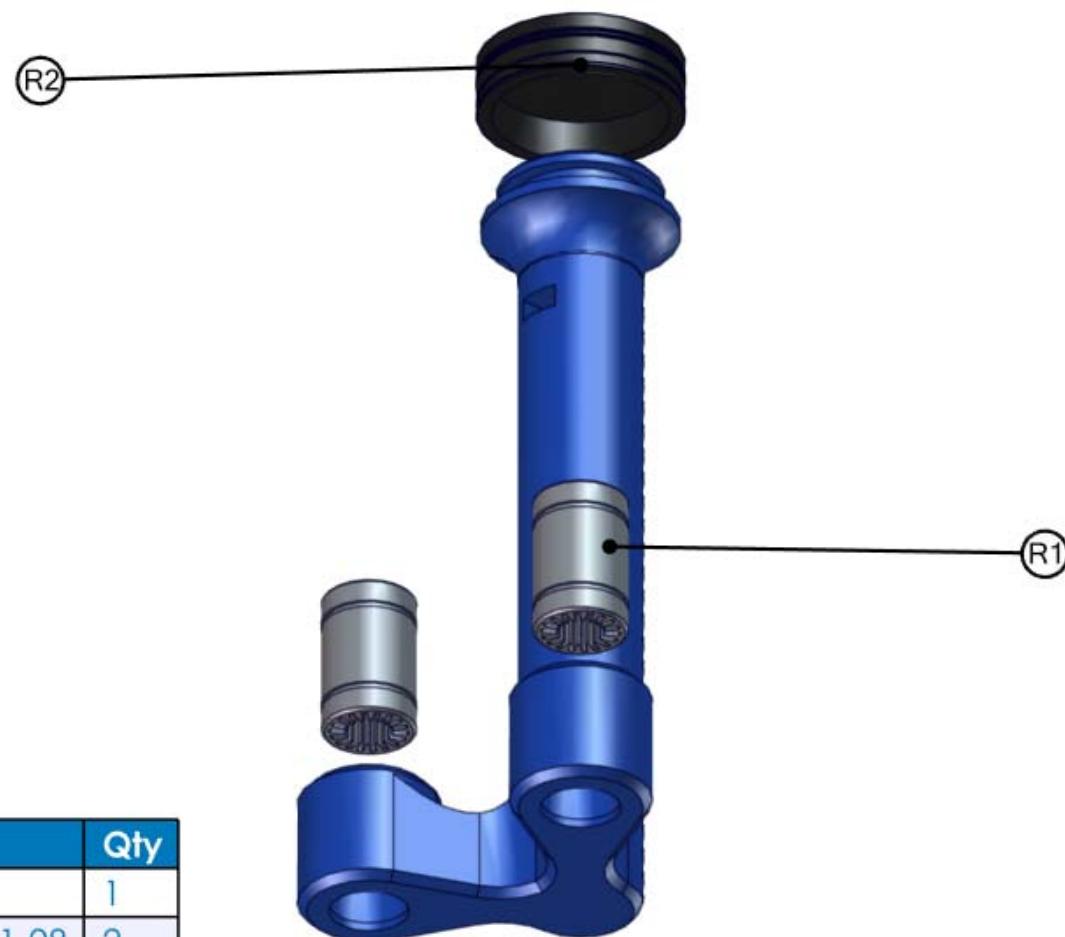
Main View



BOM ID	Description	Qty
Q3	Plunger 3	1
Q2	Plunger 2	1
Q1	Plunger 1	1
Q4	DIN7991 M4x35	1
Q5	DIN934 M4	1

35





BOM ID	Description	Qty
R2	Plunger 100ml	1
R1	Igus DryLin RJMP 01-08	2

37



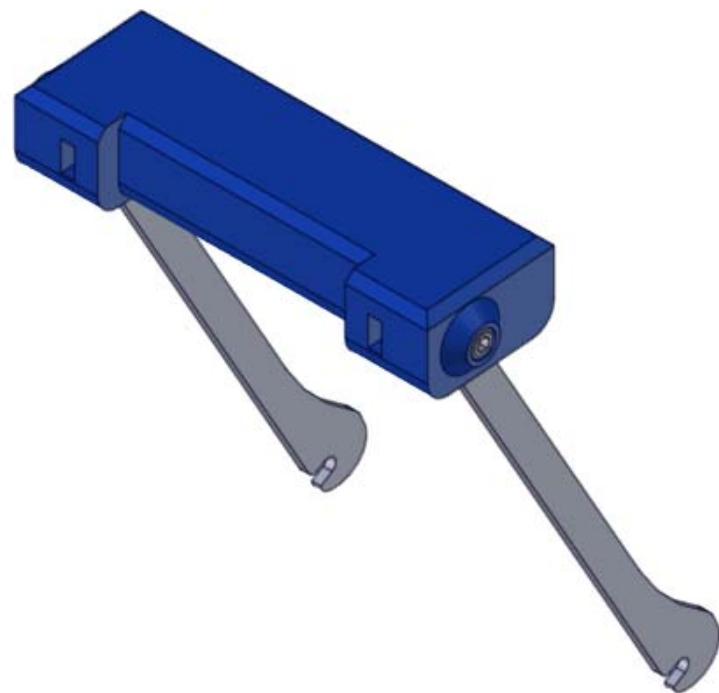
38



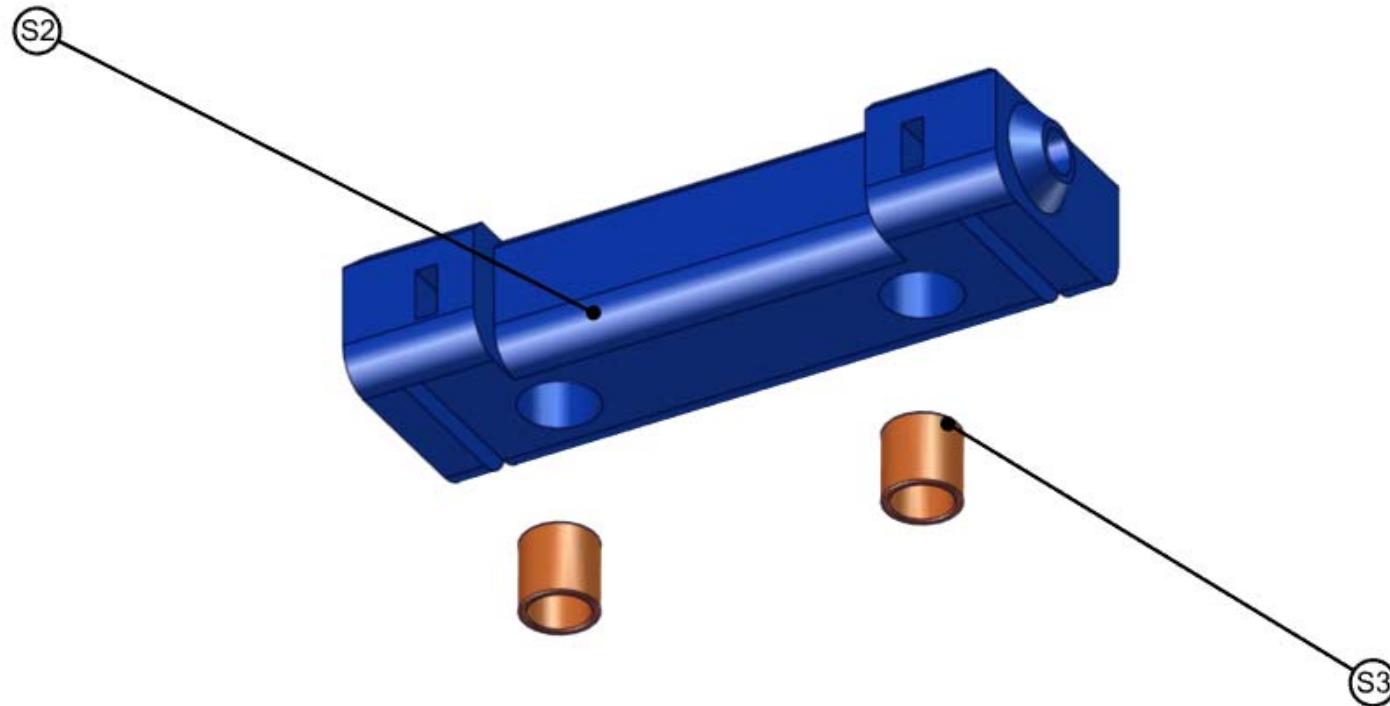


PASTE EXTRUDER

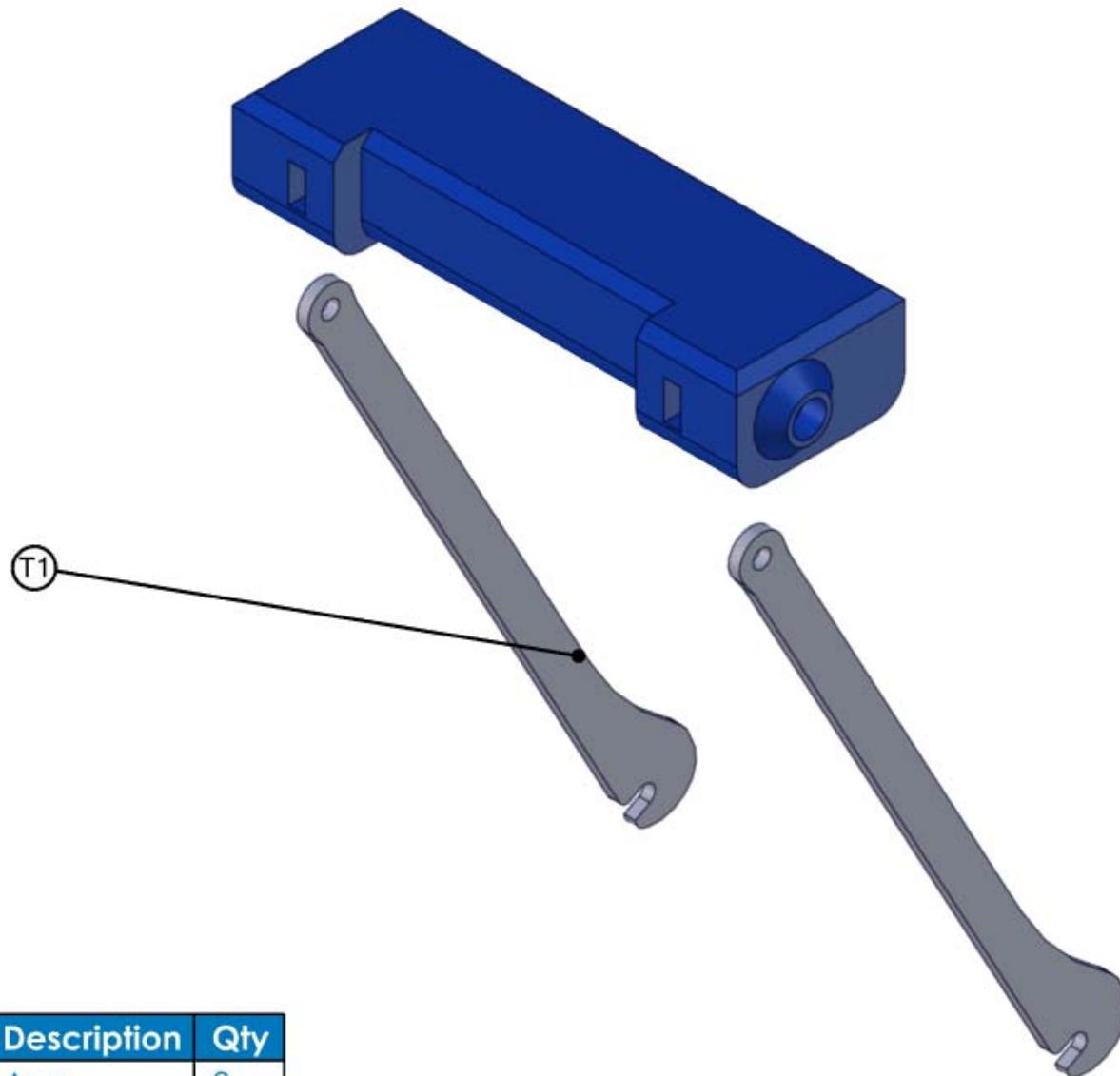
Braces



Main View

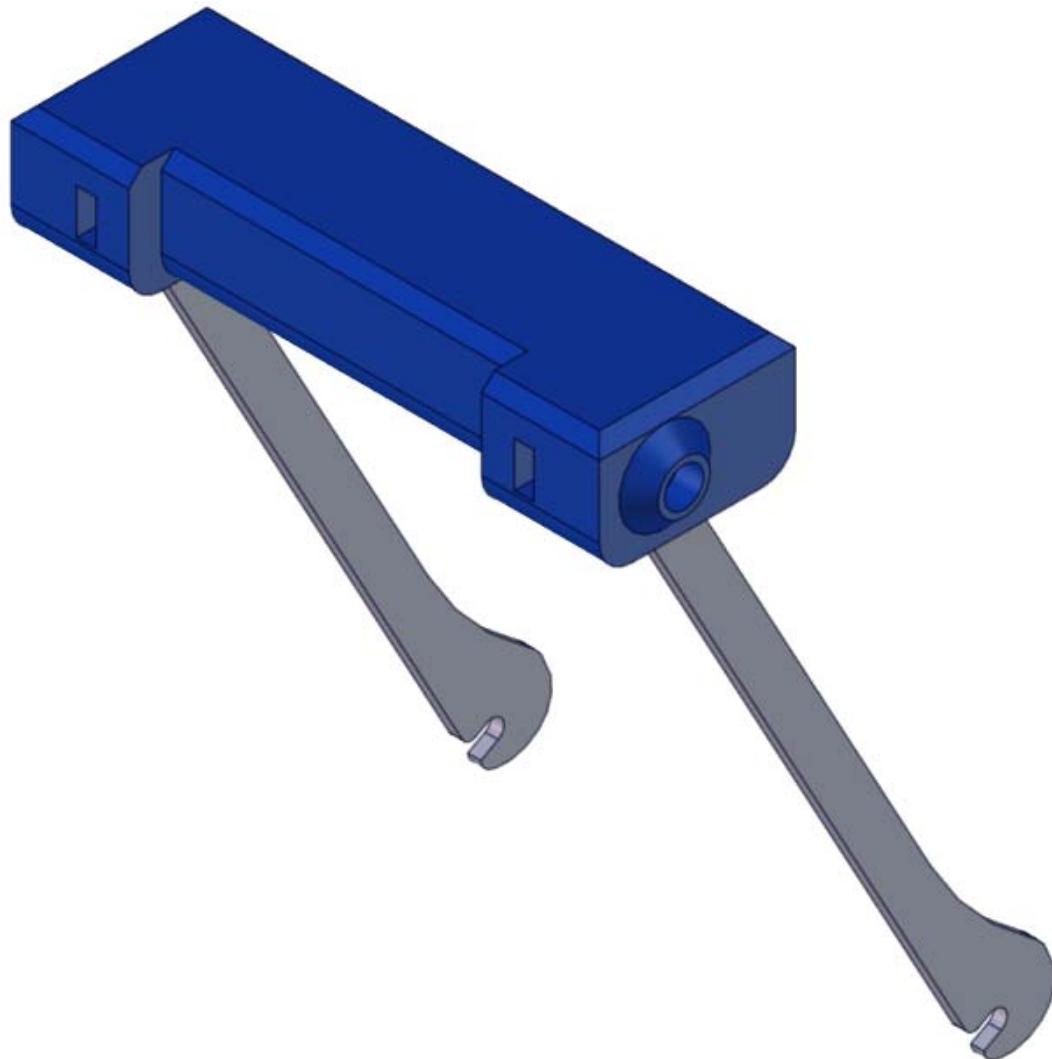


BOM ID	Description	Qty
S3	Selfoil A-8-10	2
S2	Bar Holder	1

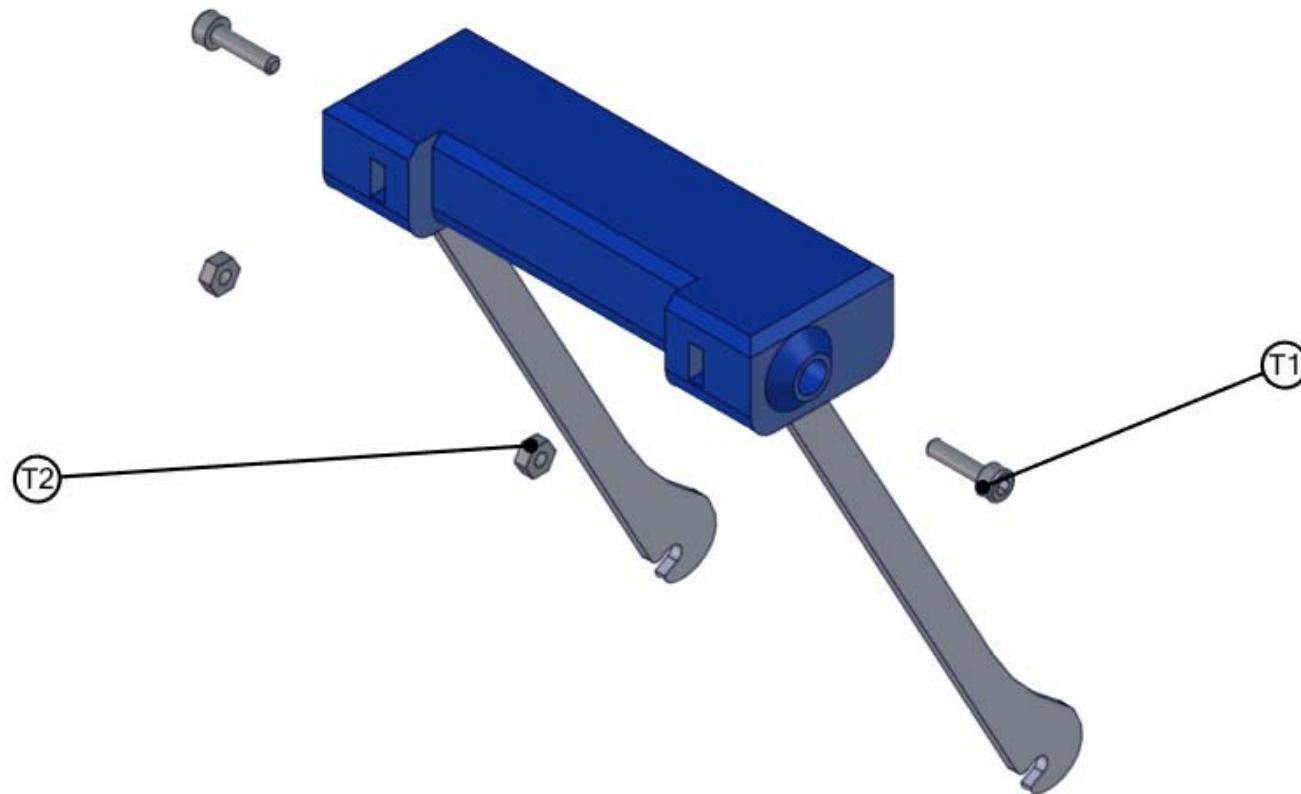


BOM ID	Description	Qty
T1	Arm	2

41

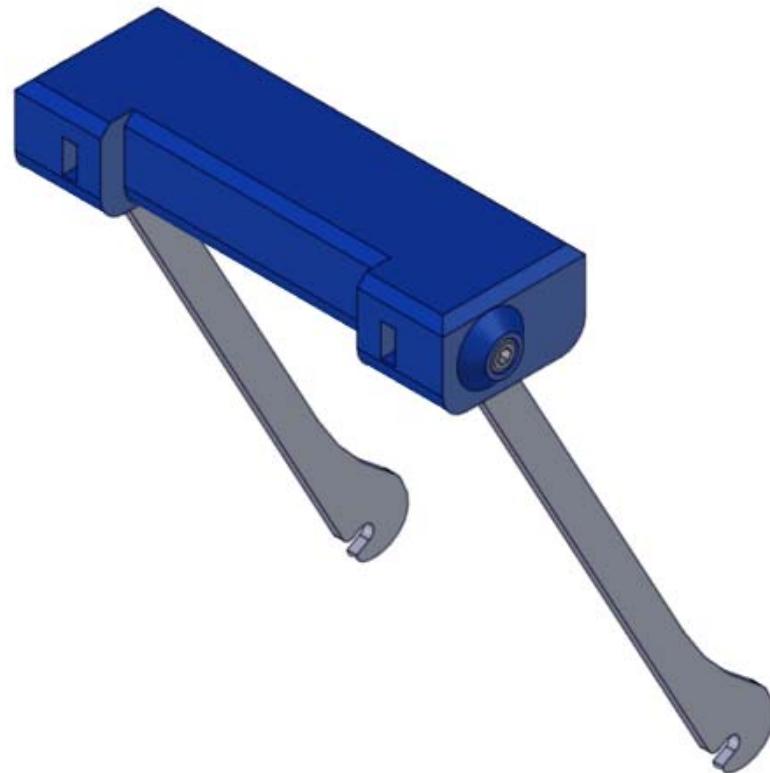


42



BOM ID	Description	Qty
T2	DIN934 M3	2
T1	DIN912 M3x12	2

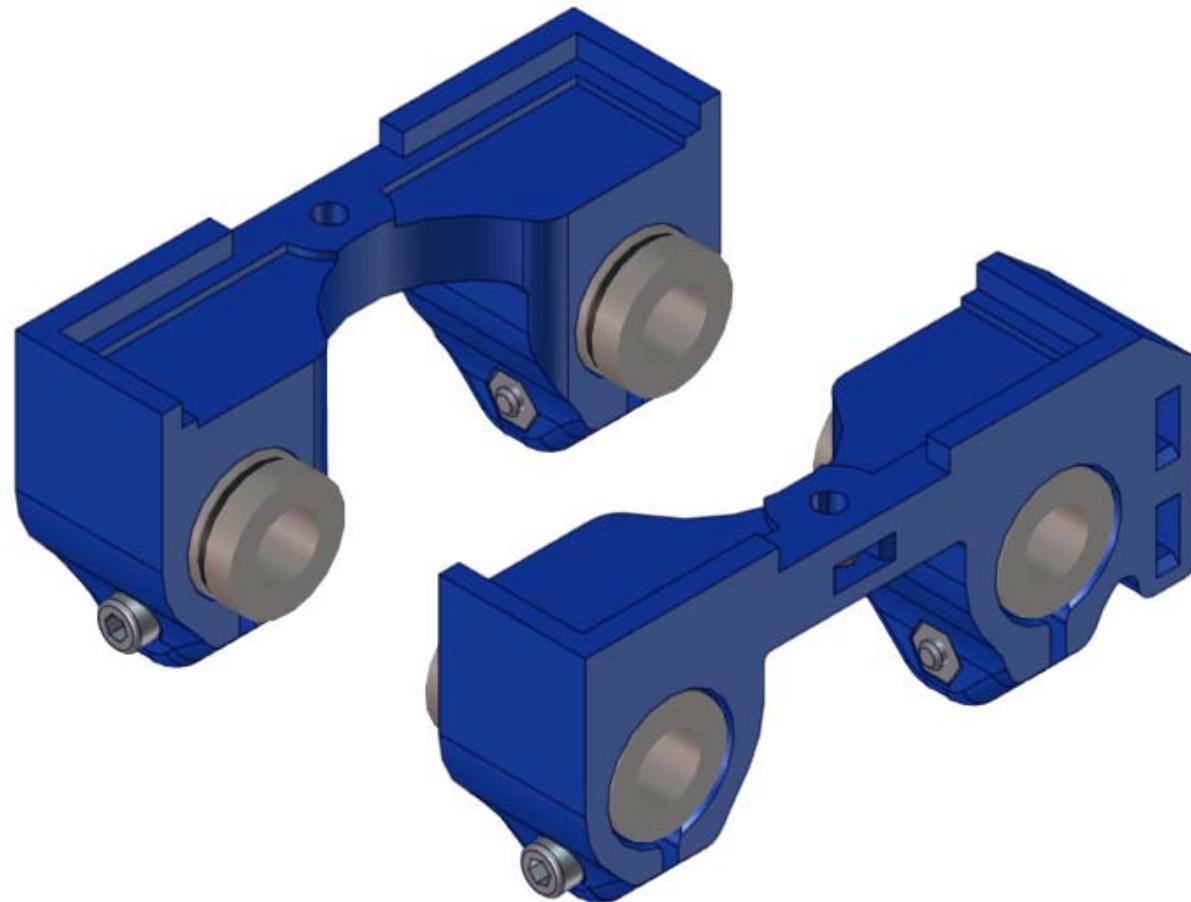
43



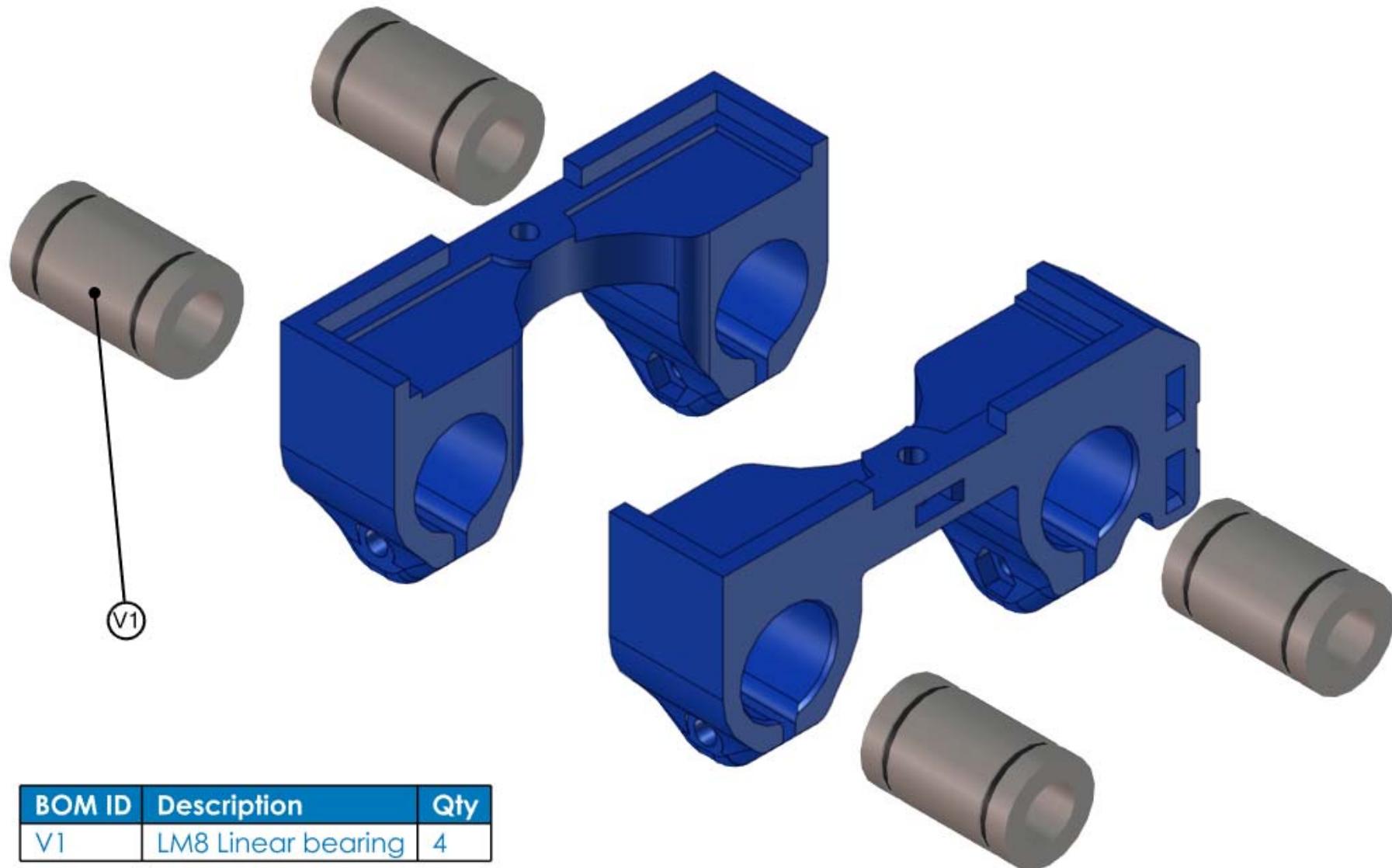


PASTE EXTRUDER

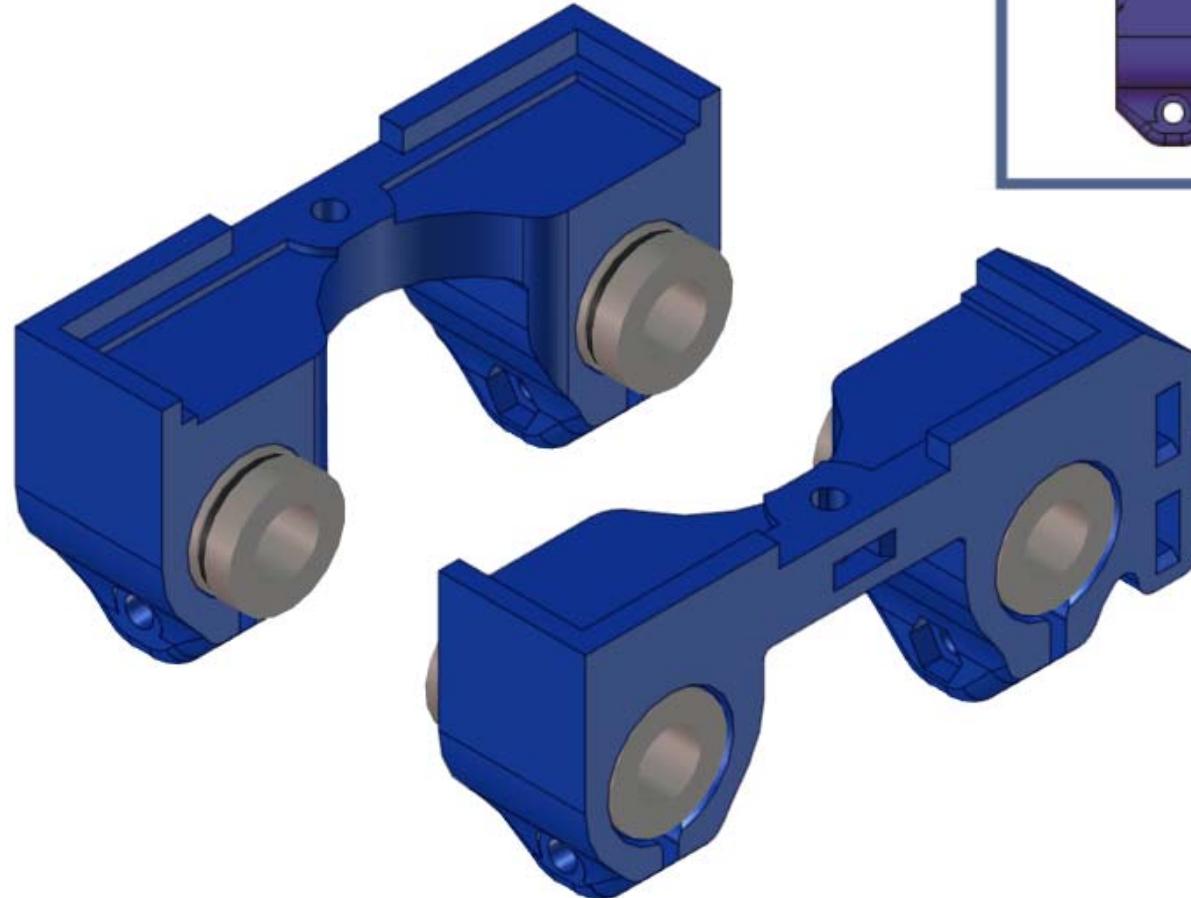
Carriage



Main View

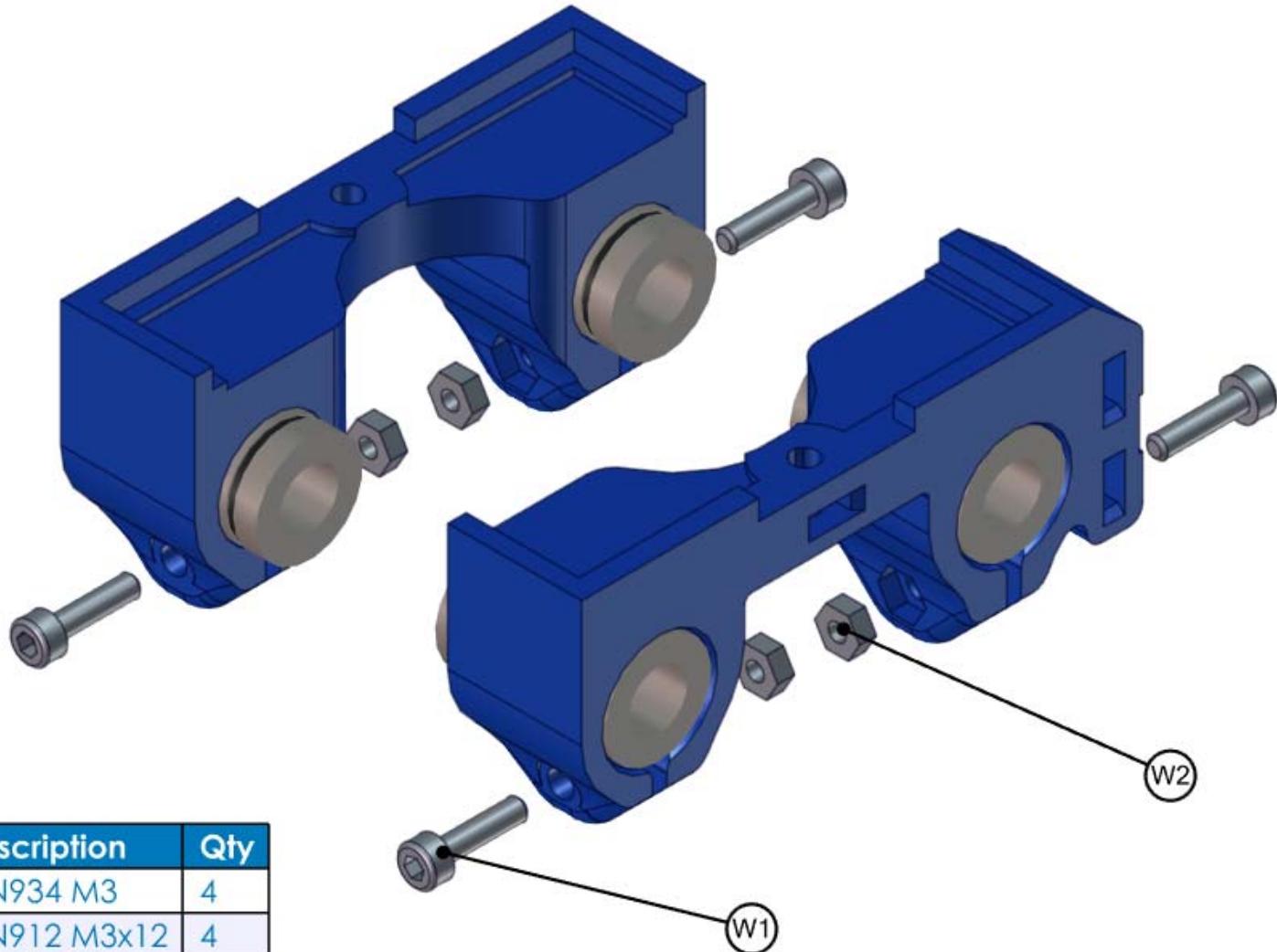


BOM ID	Description	Qty
V1	LM8 Linear bearing	4



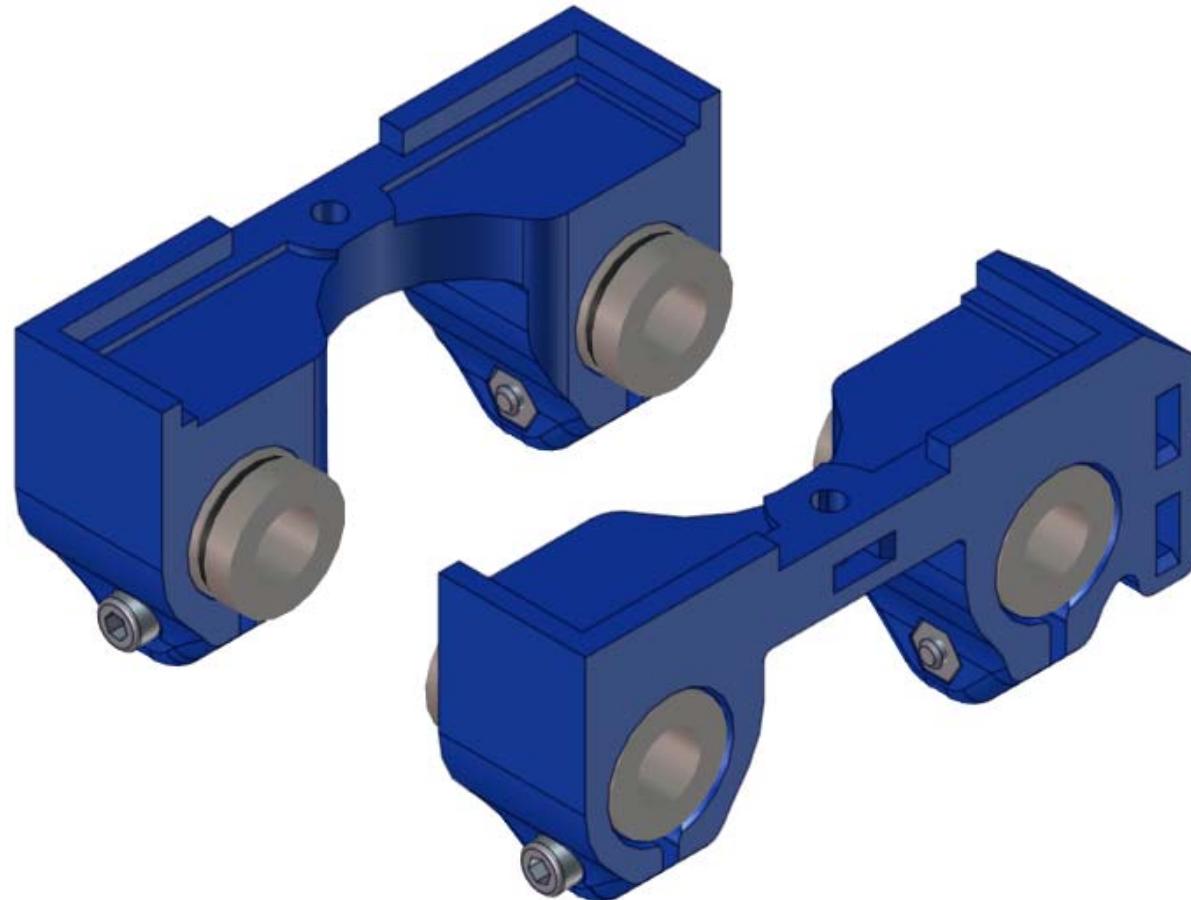
Align the LM8 linear bearing to the outside of the carriages.





BOM ID	Description	Qty
W2	DIN934 M3	4
W1	DIN912 M3x12	4

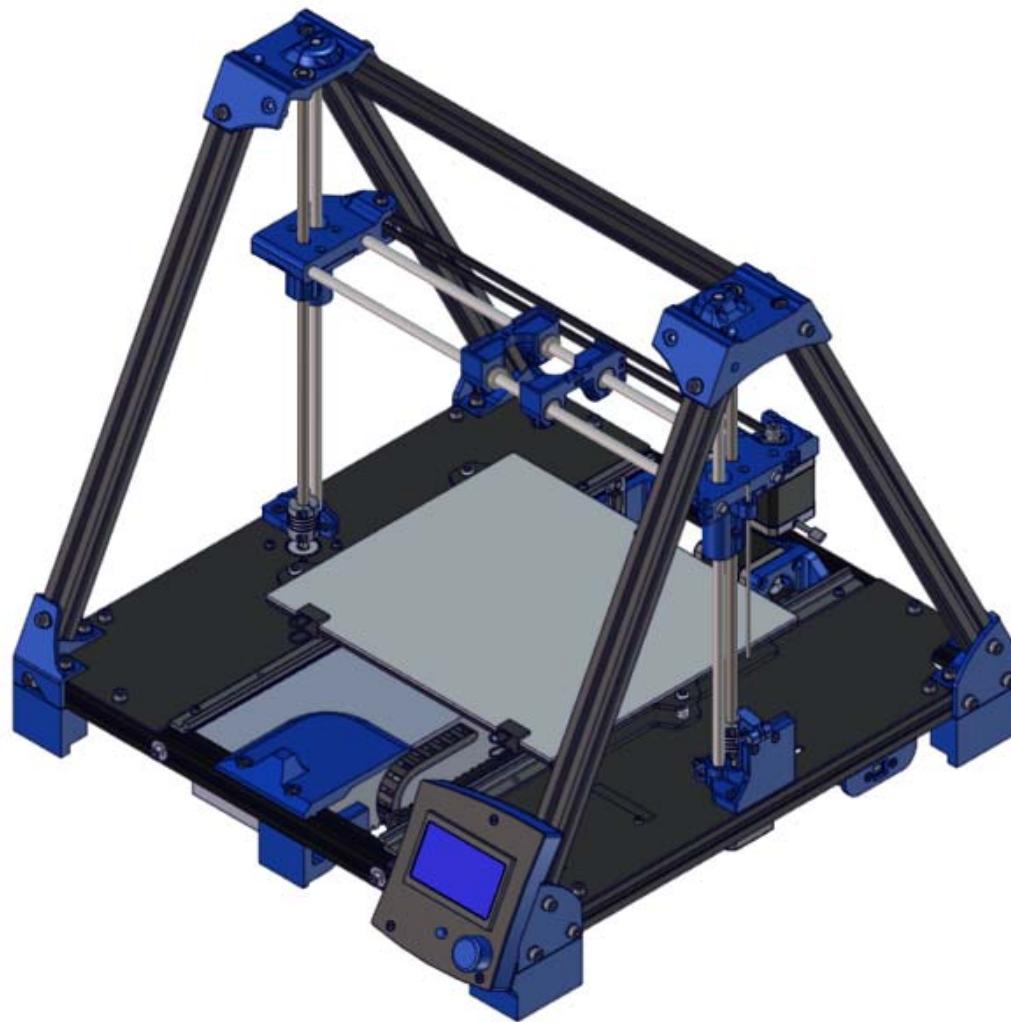
47



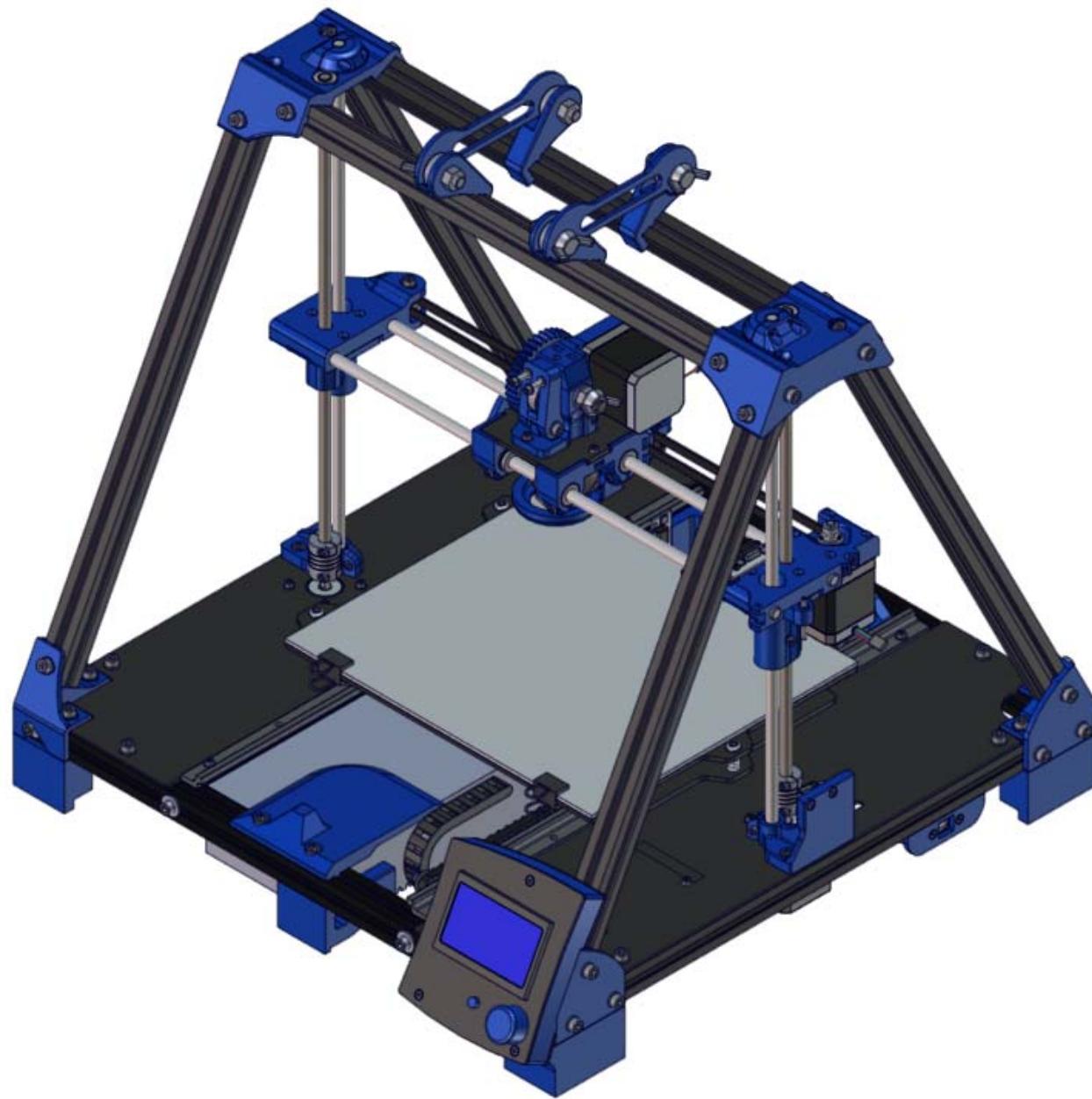


PASTE EXTRUDER

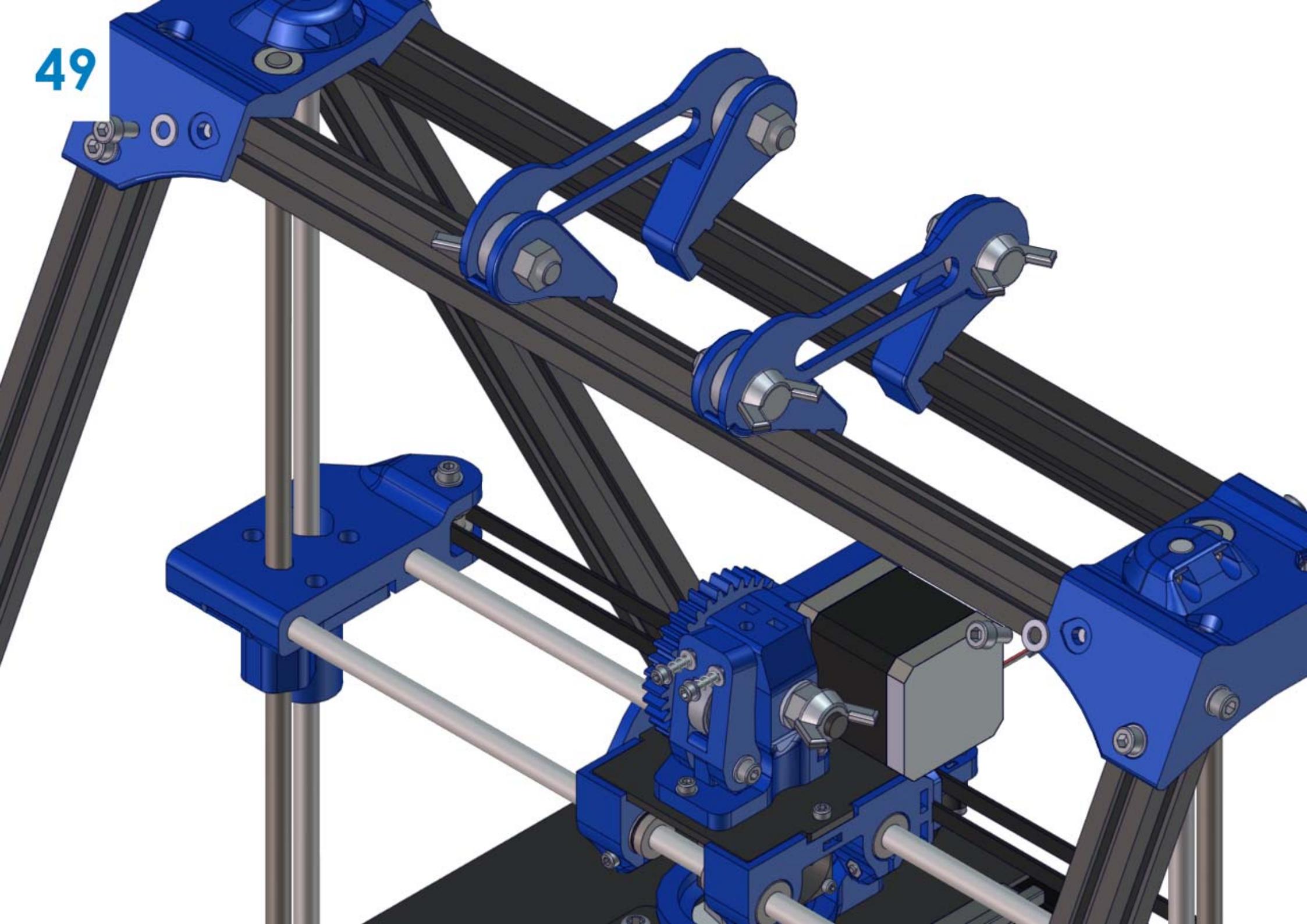
Changes in the printer



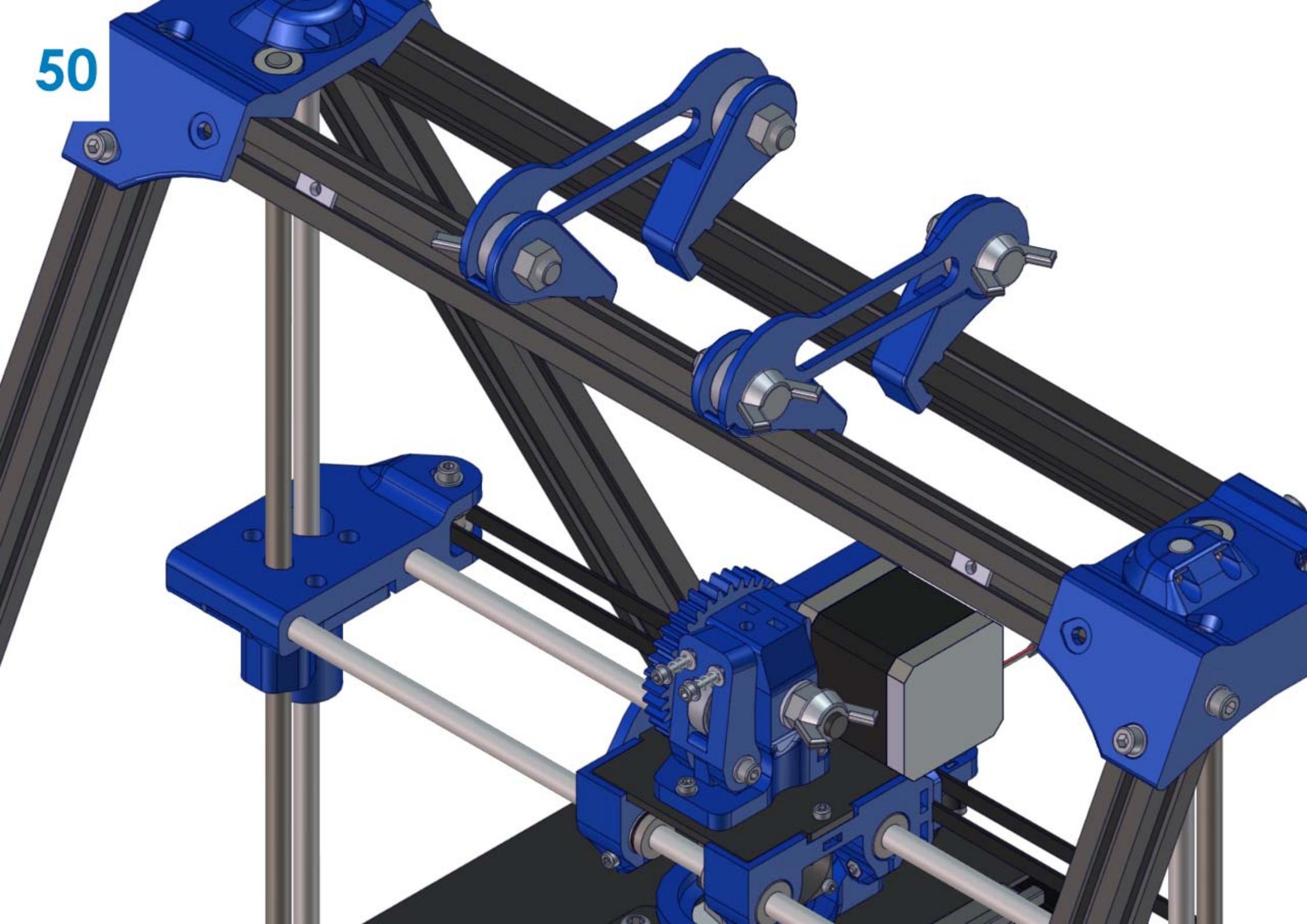
Main View



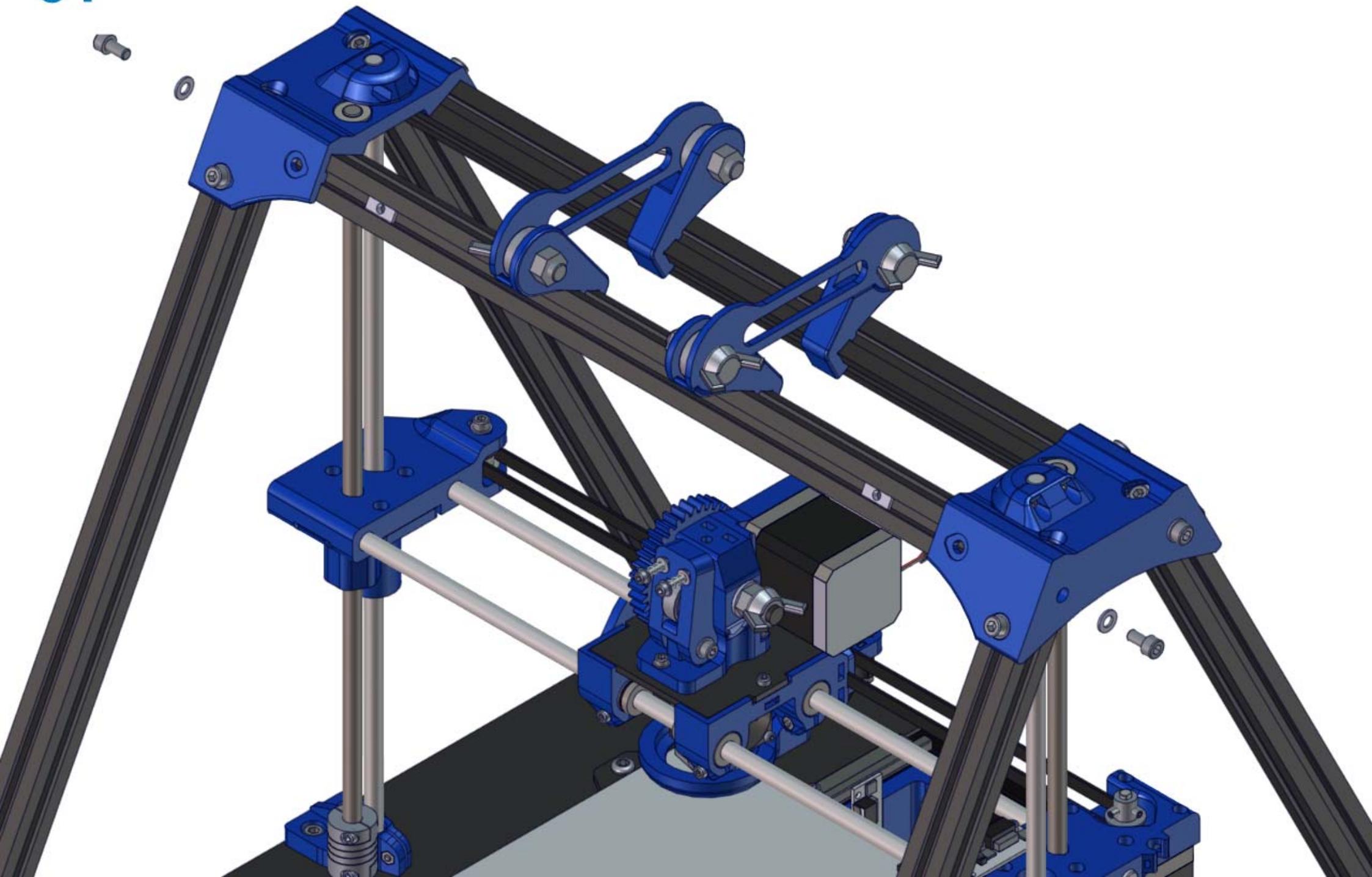
49



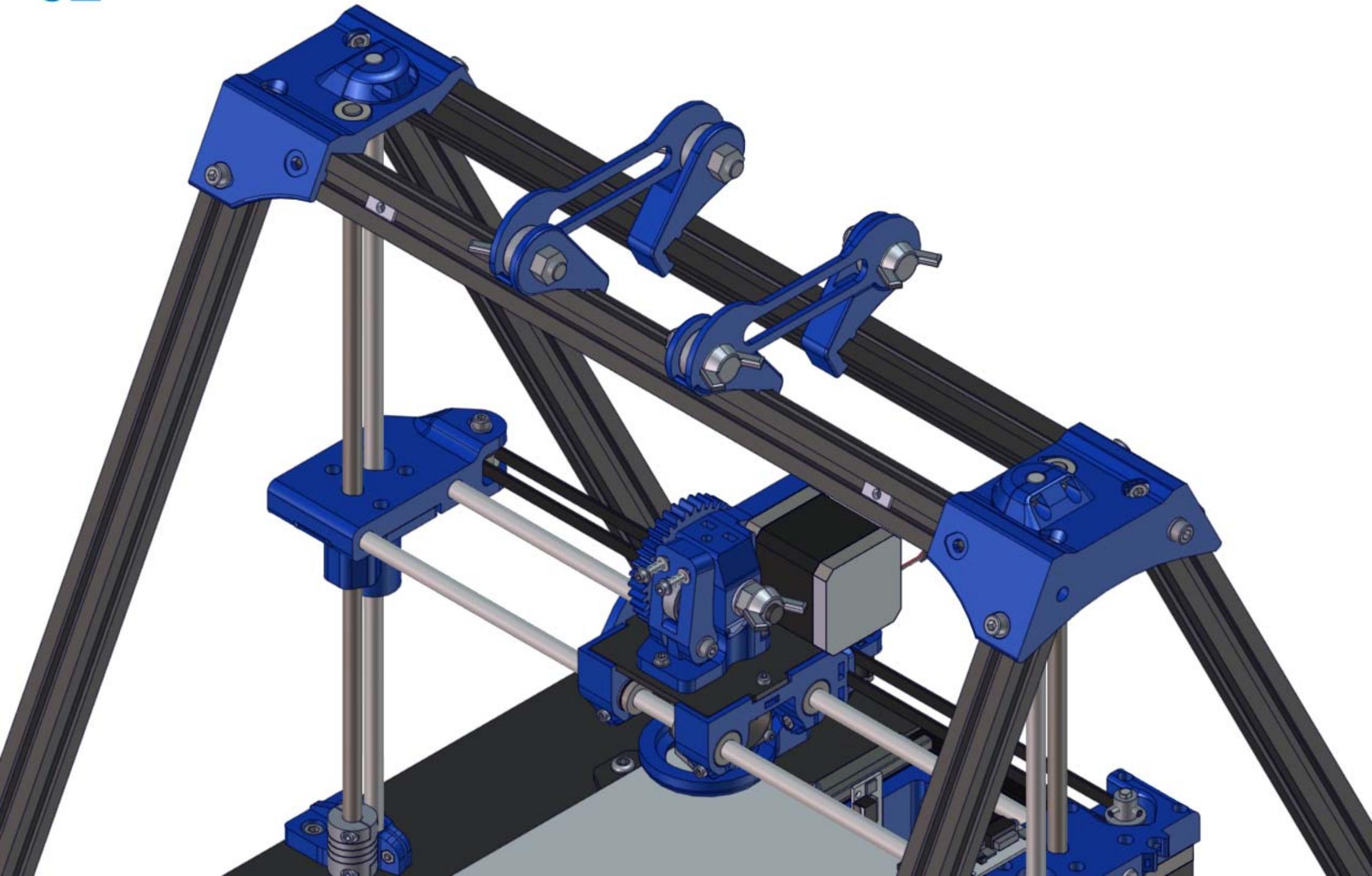
50



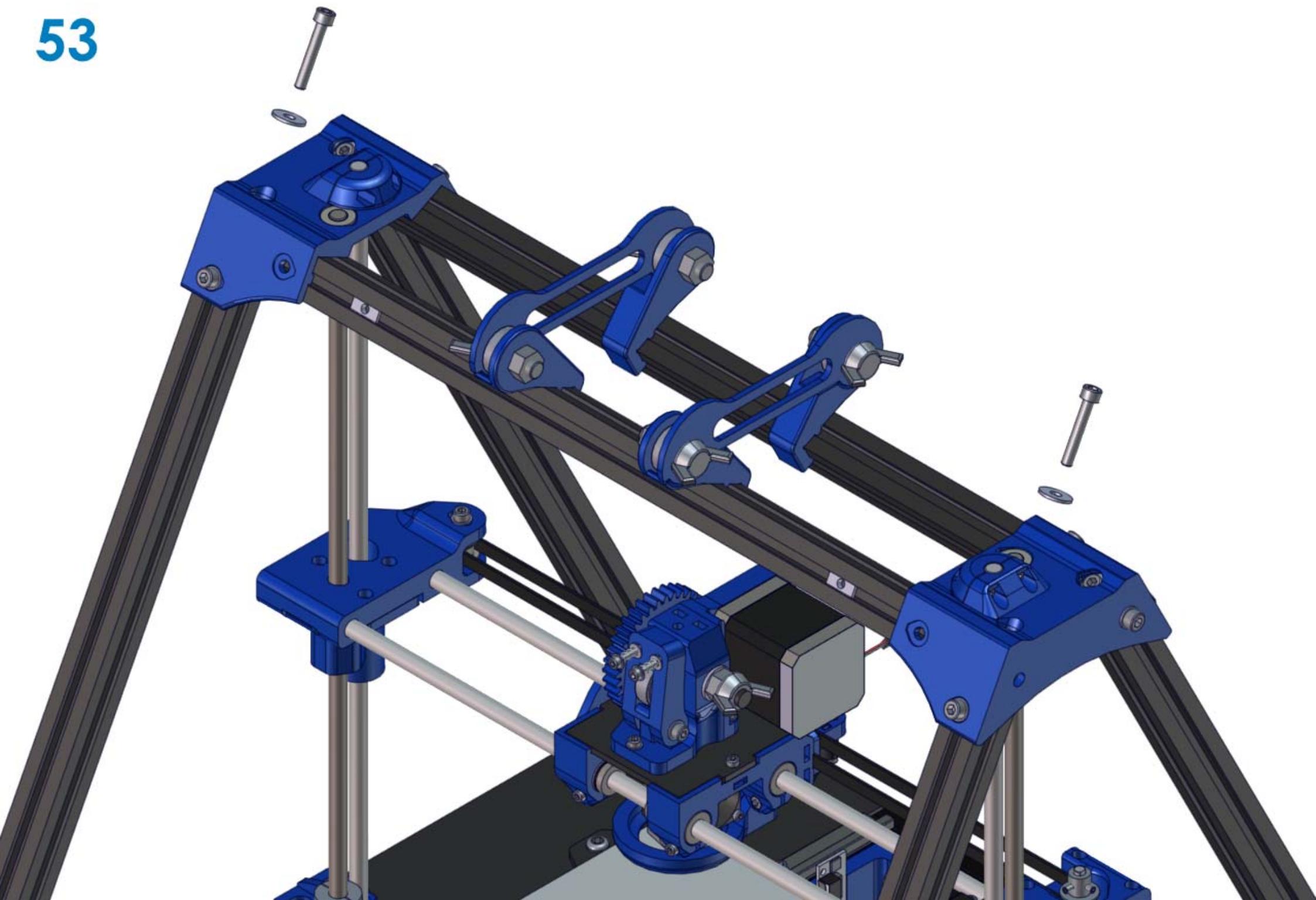
51



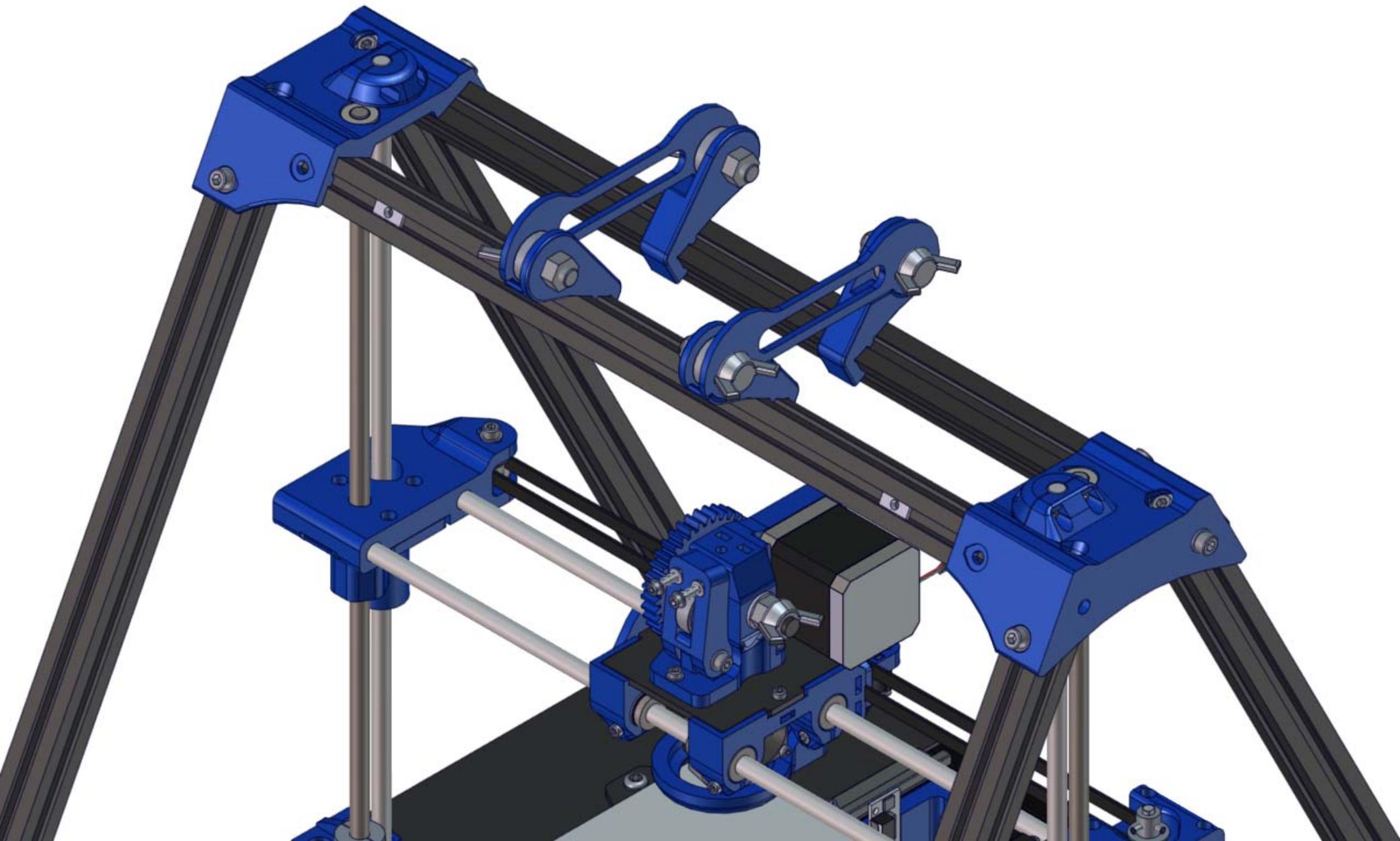
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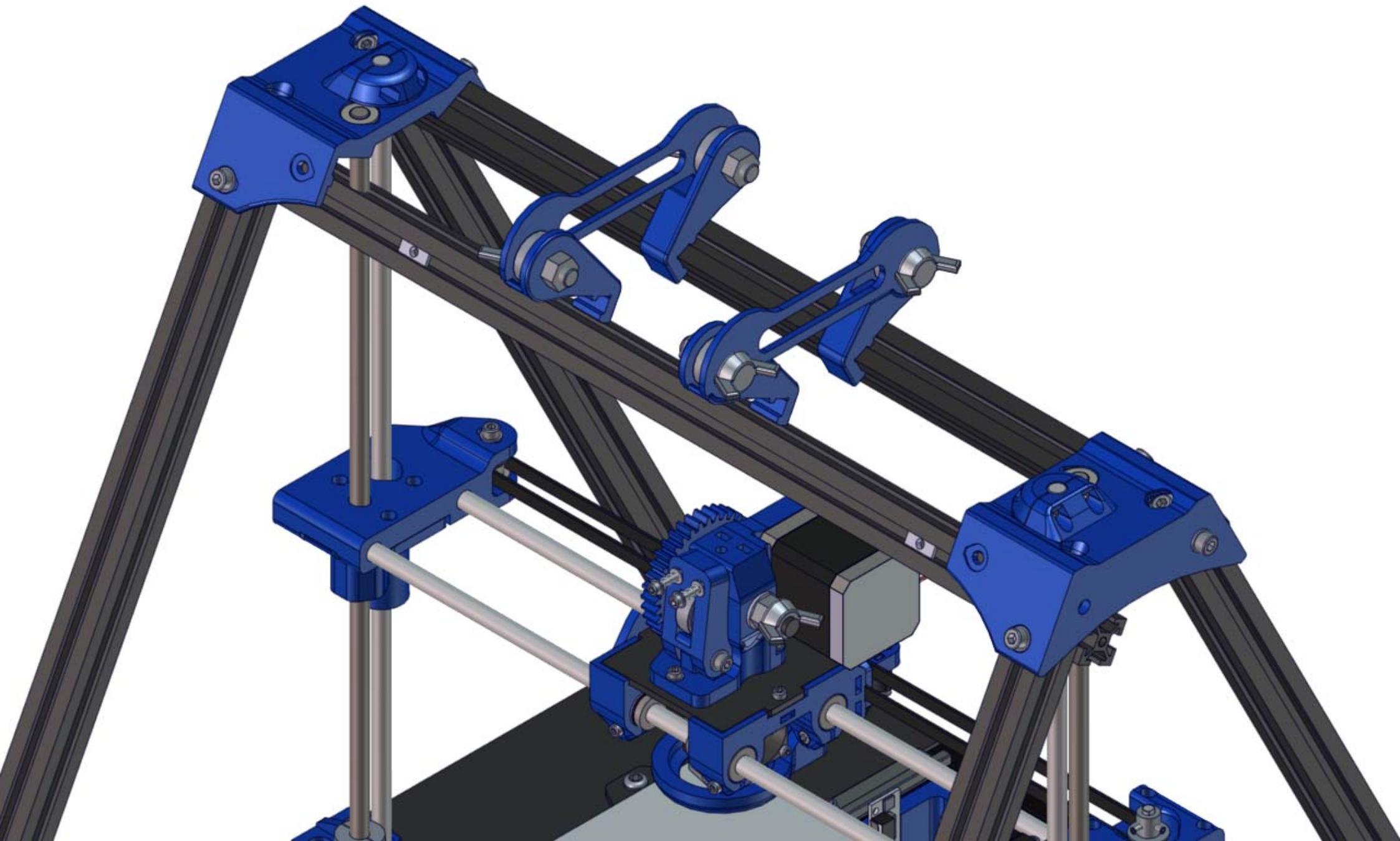
53



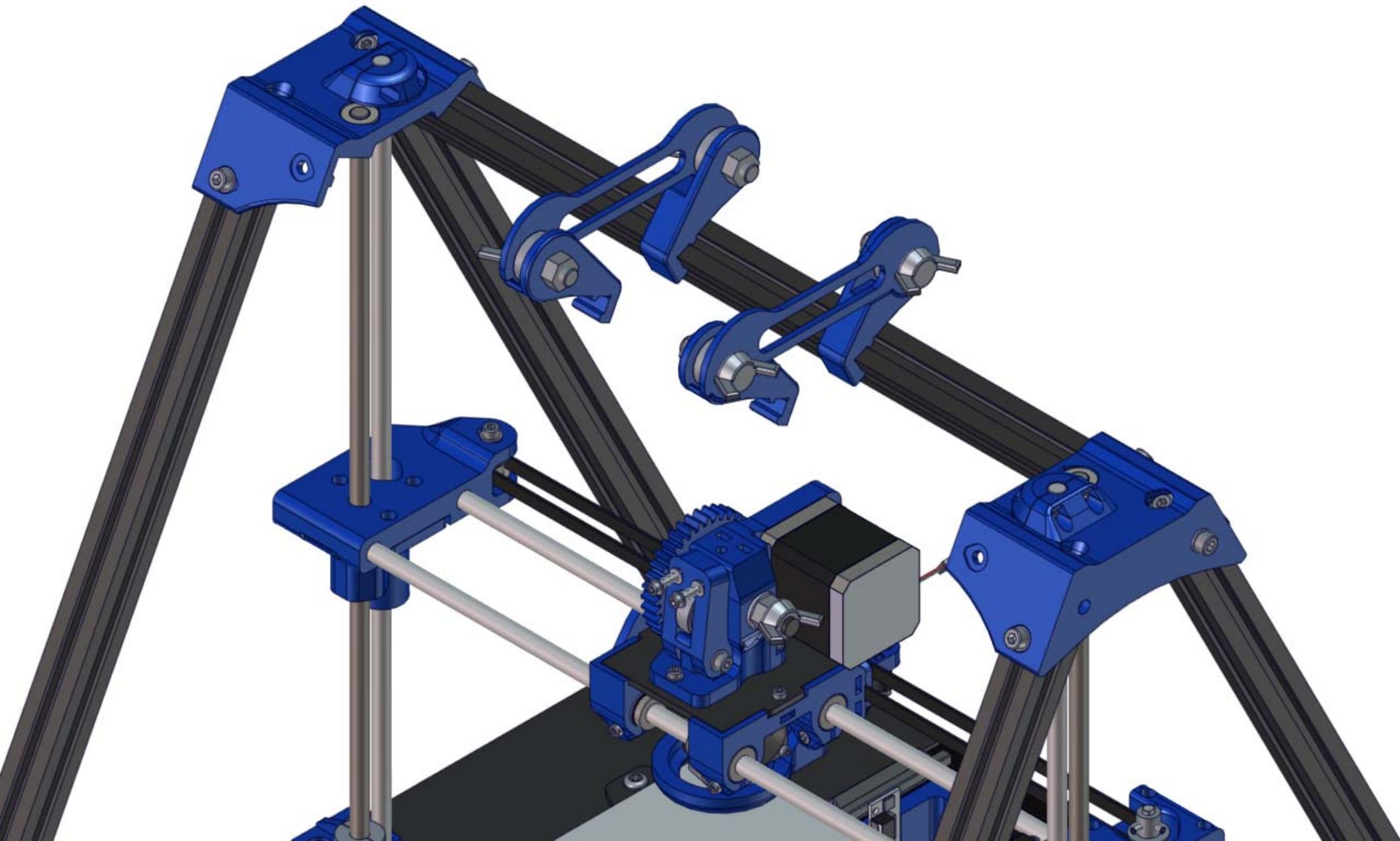
54



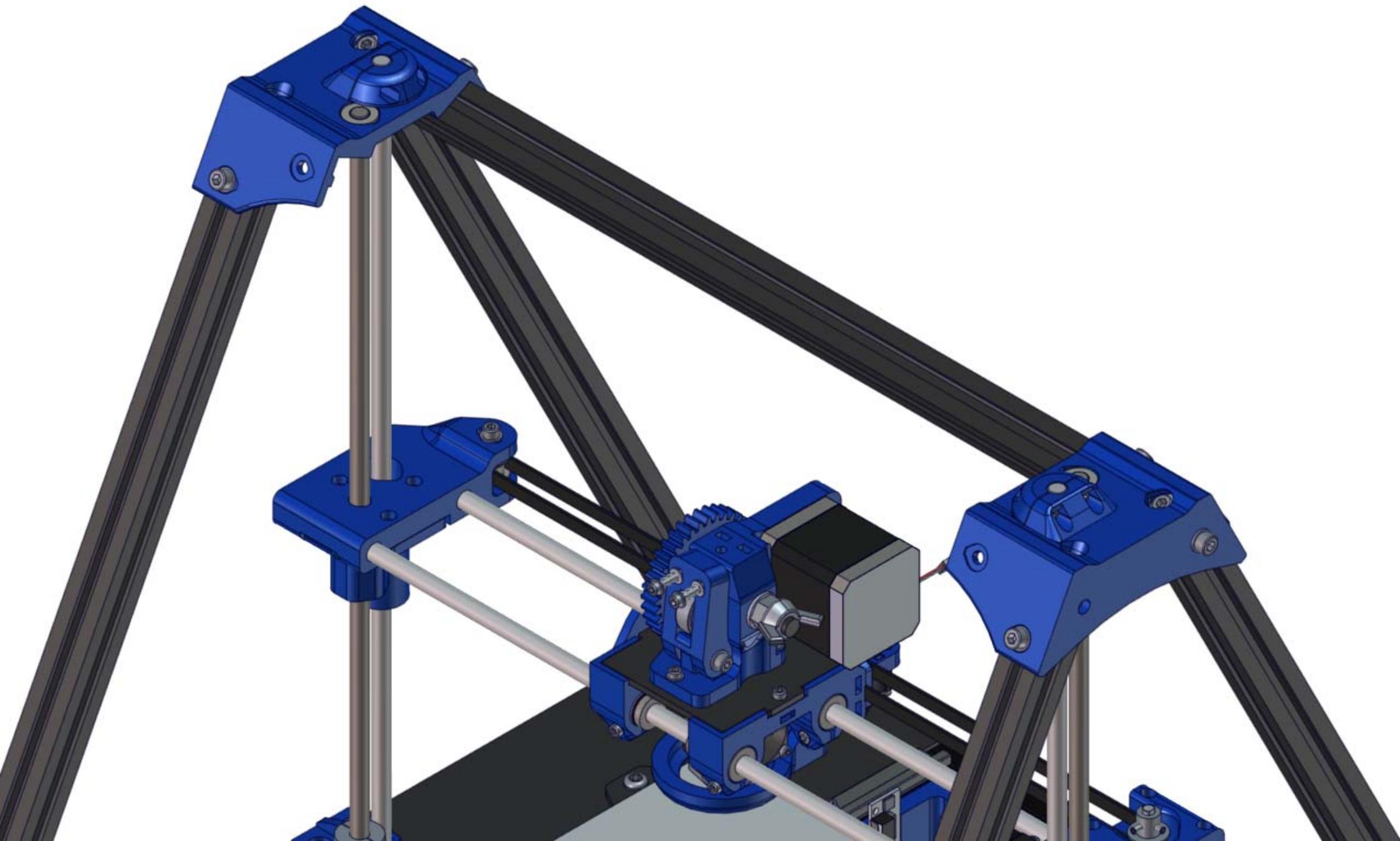
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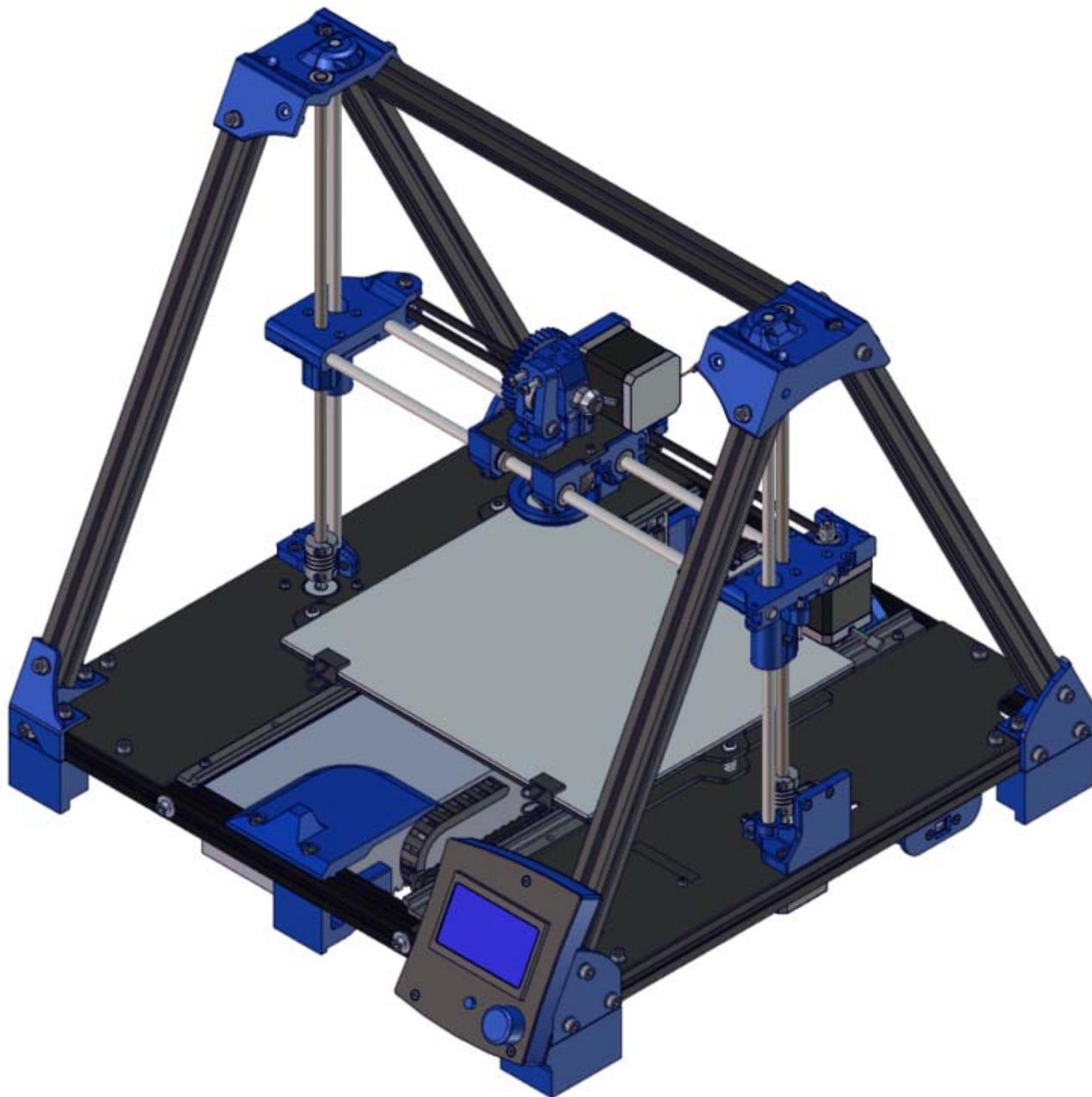
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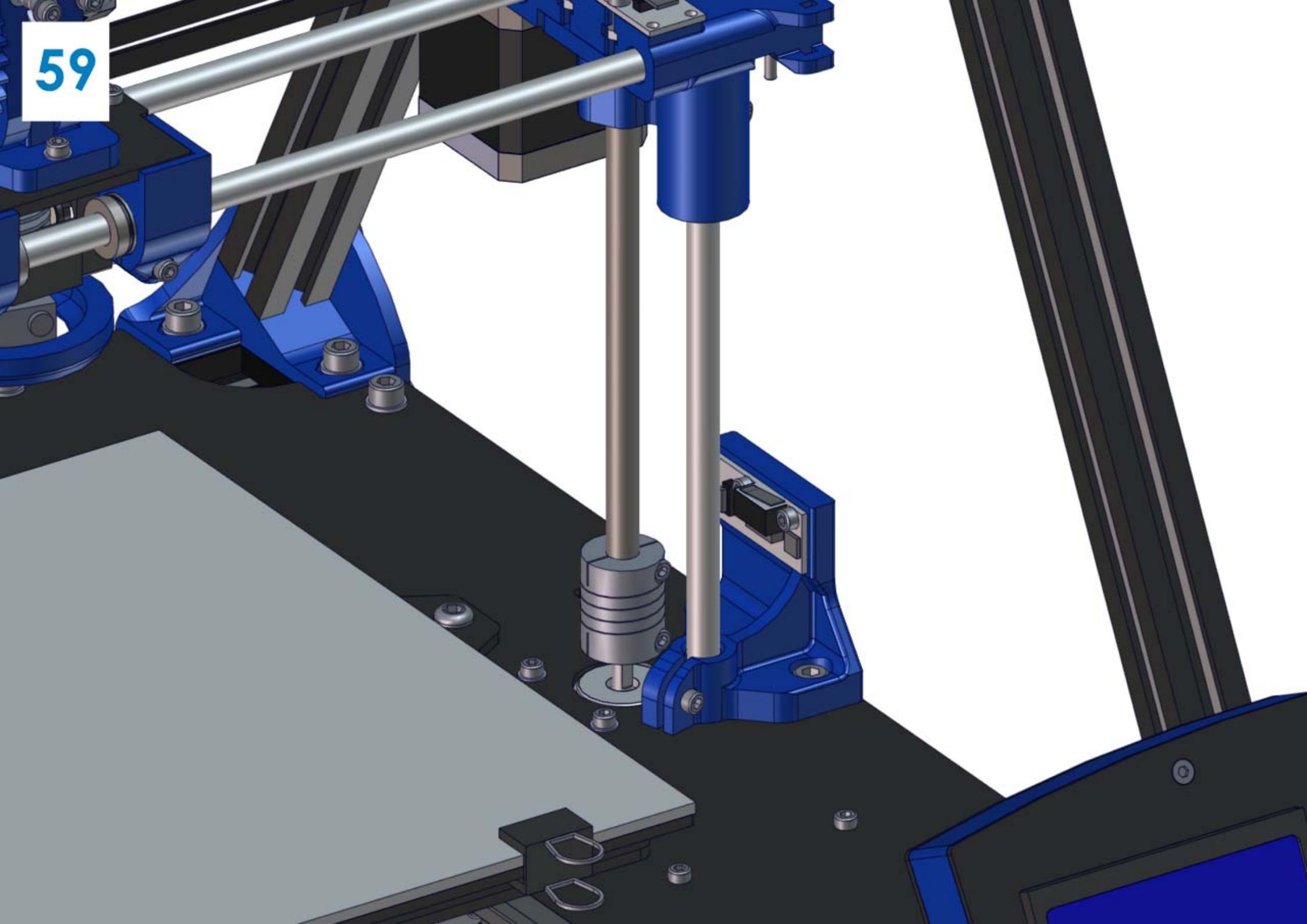
57



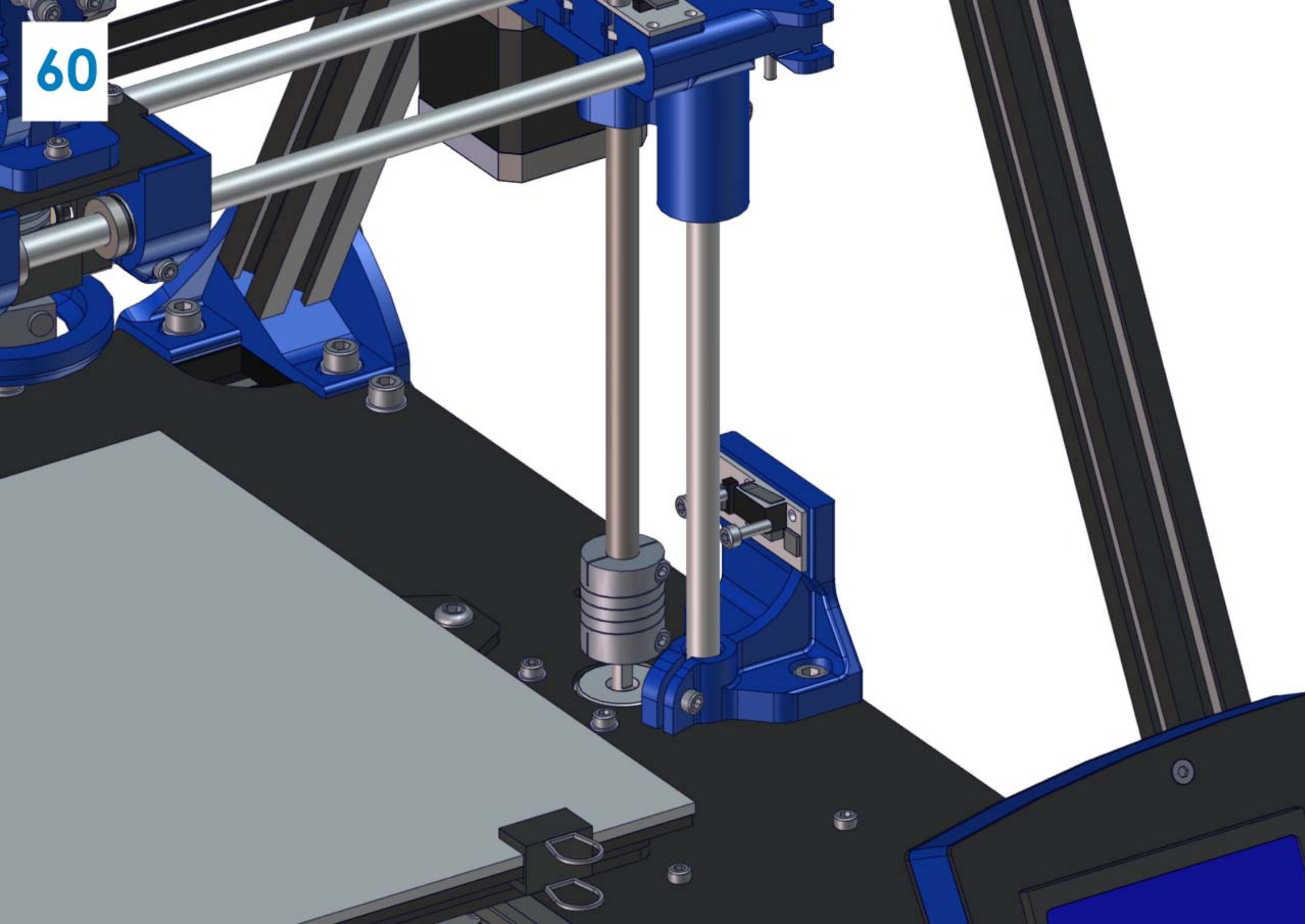
58



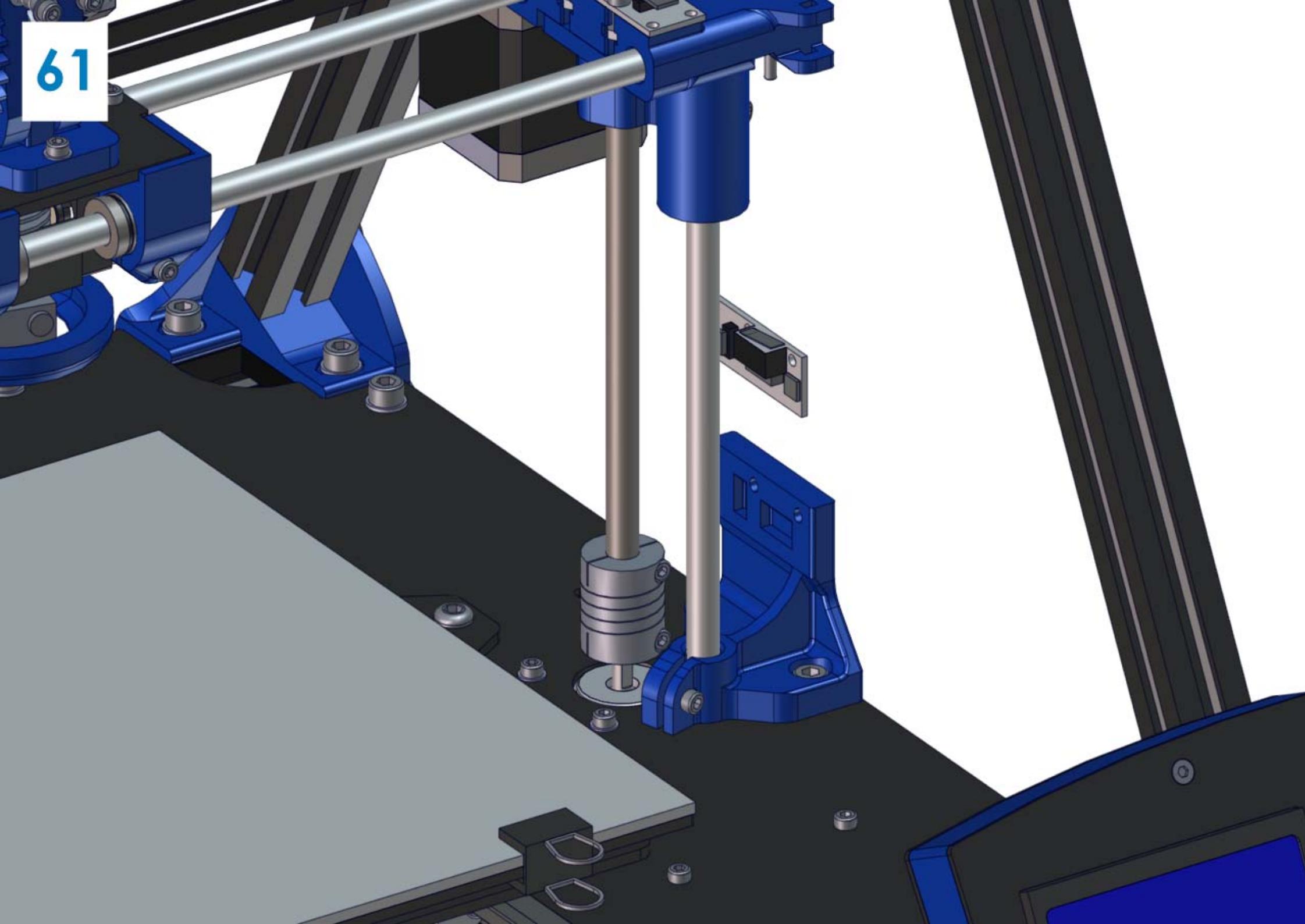
59



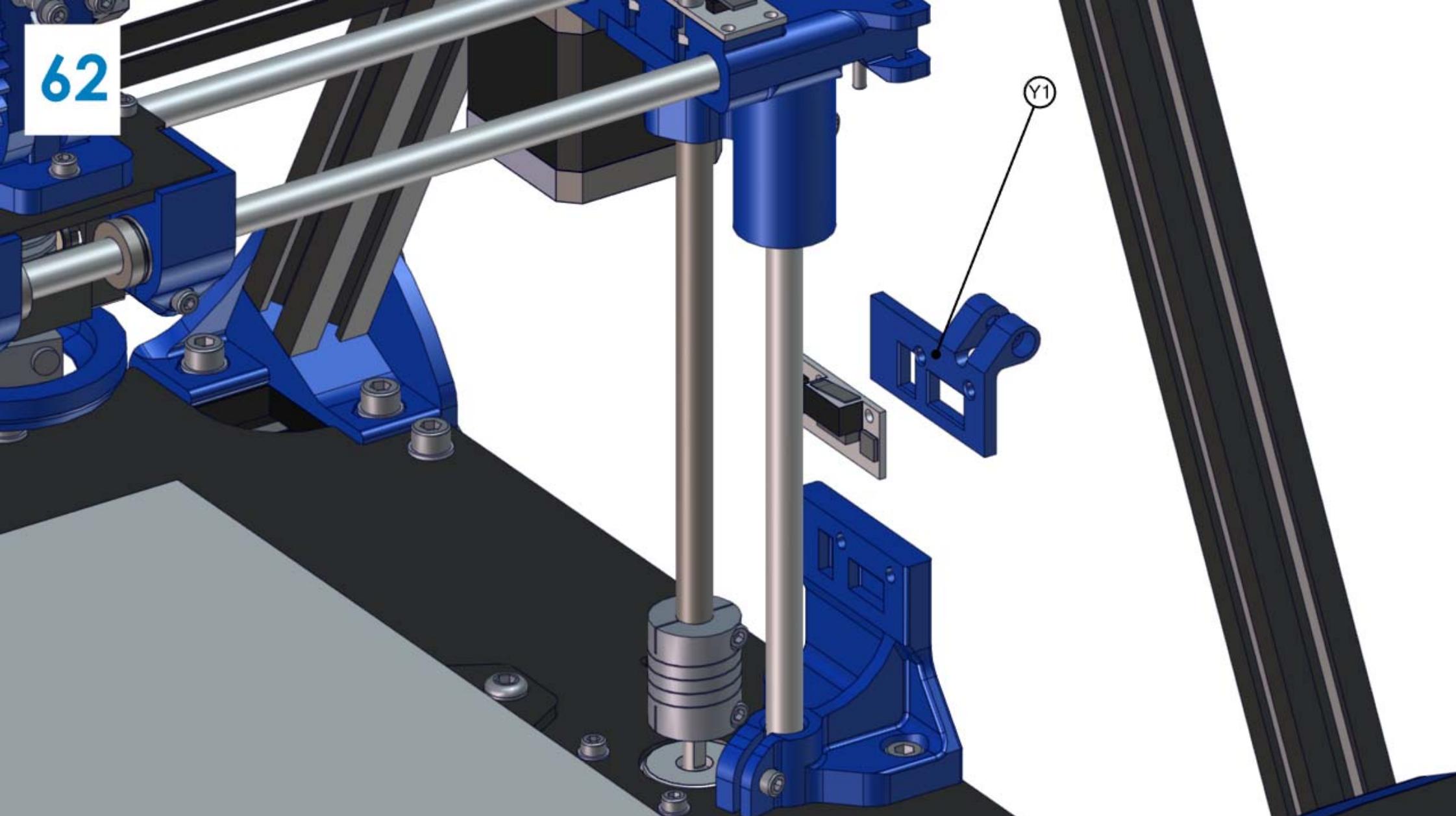
60



61

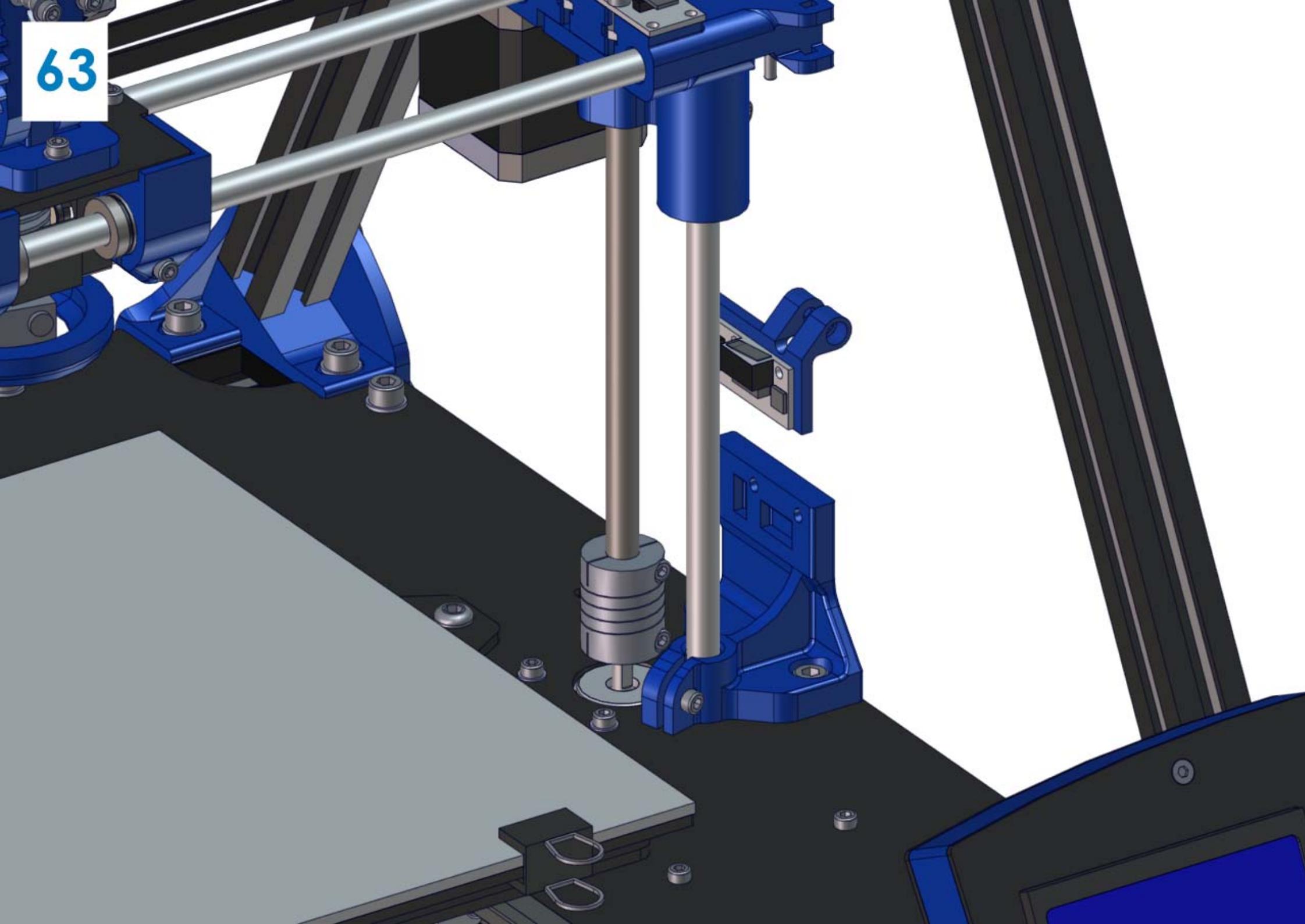


62

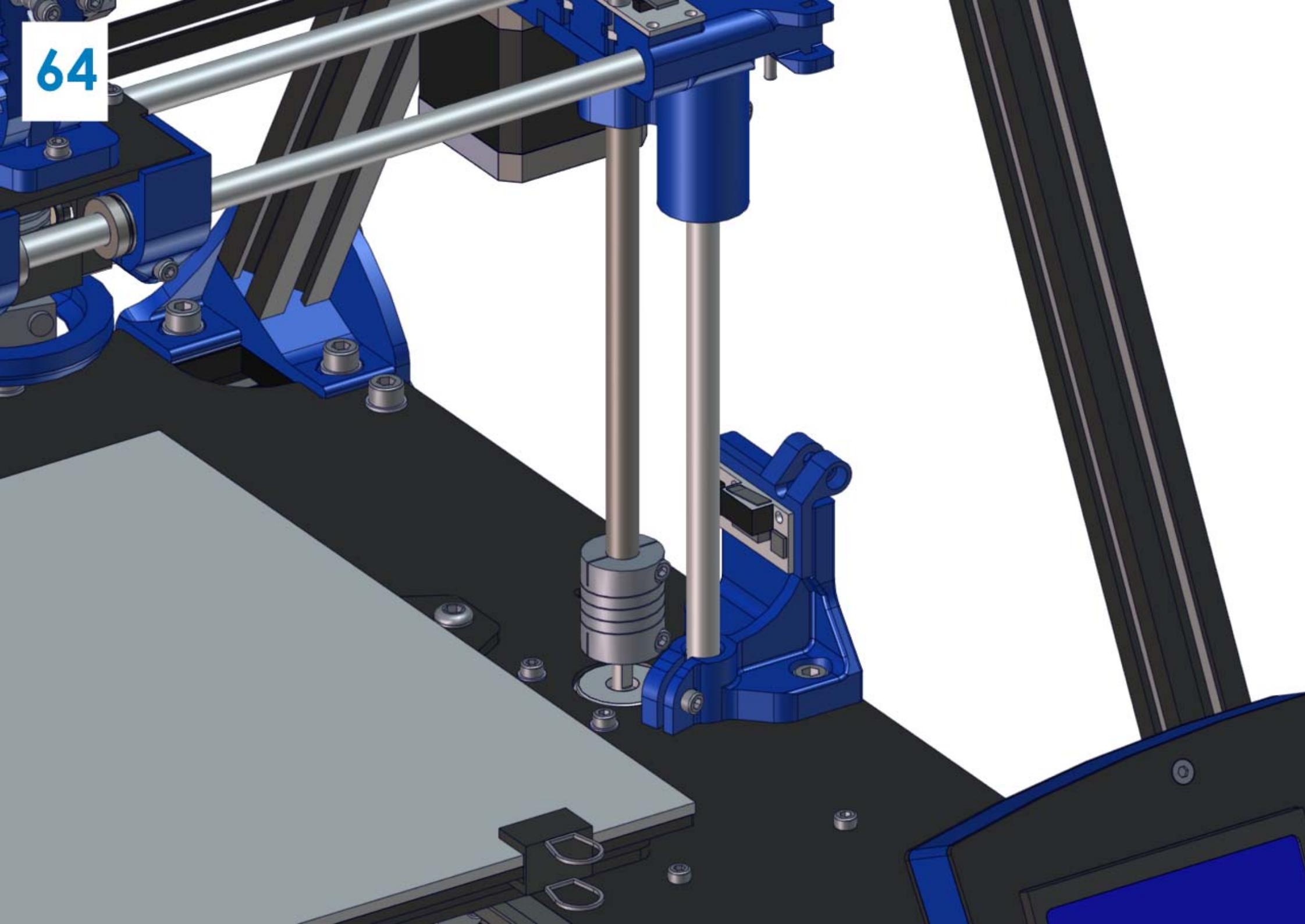


BOM ID	Description	Qty
Y1	Z EndstopFeature 1	1

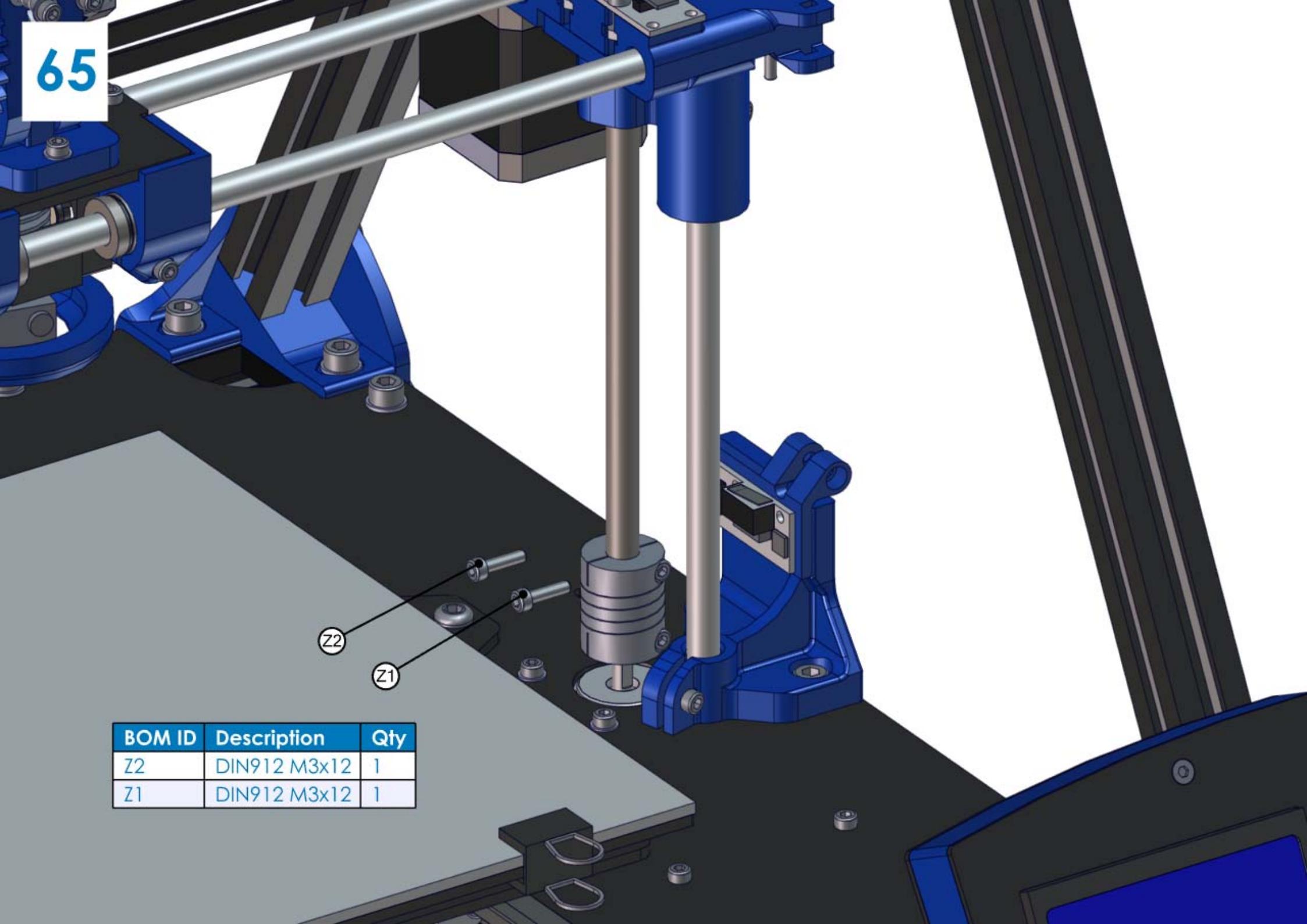
63



64

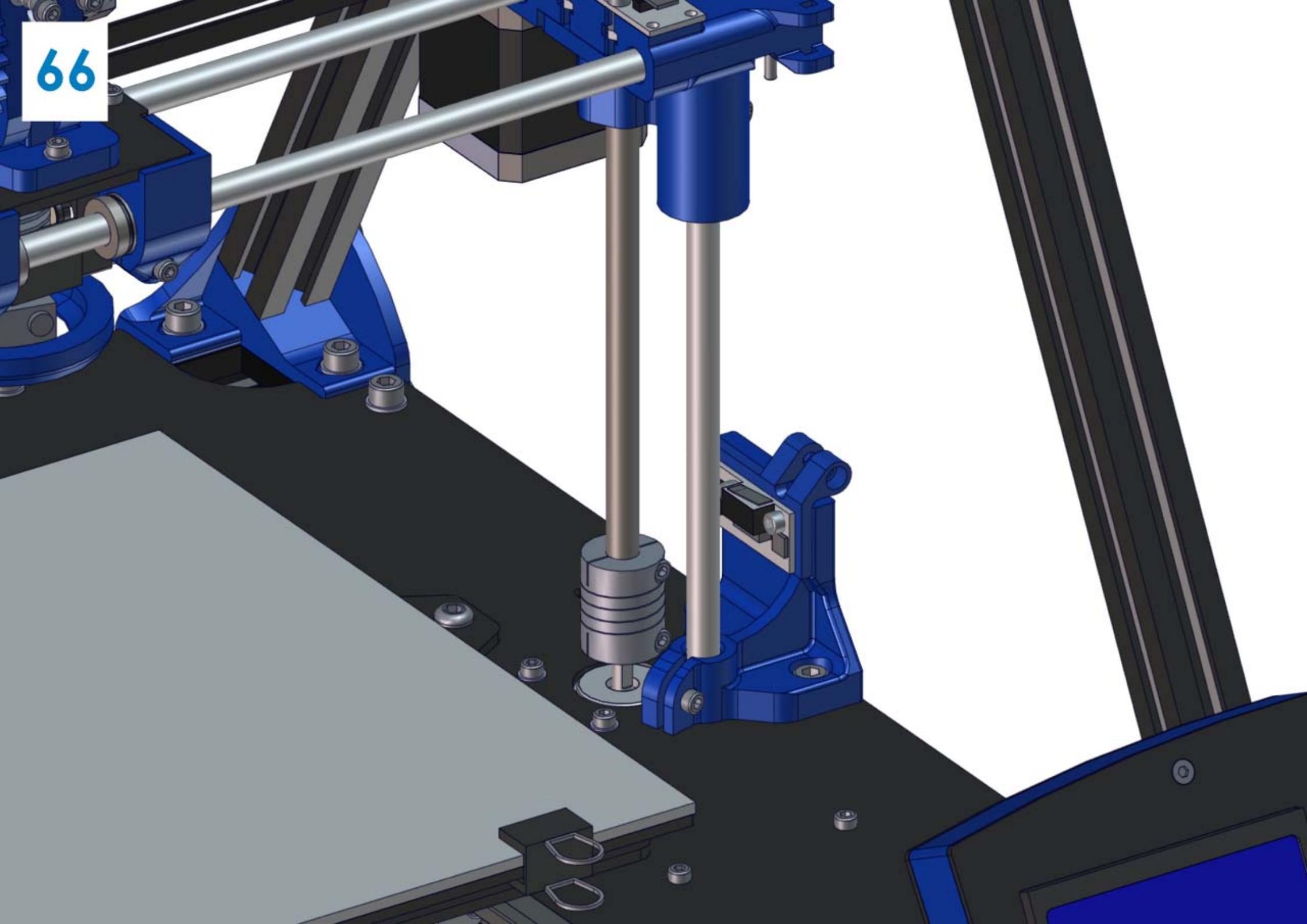


65

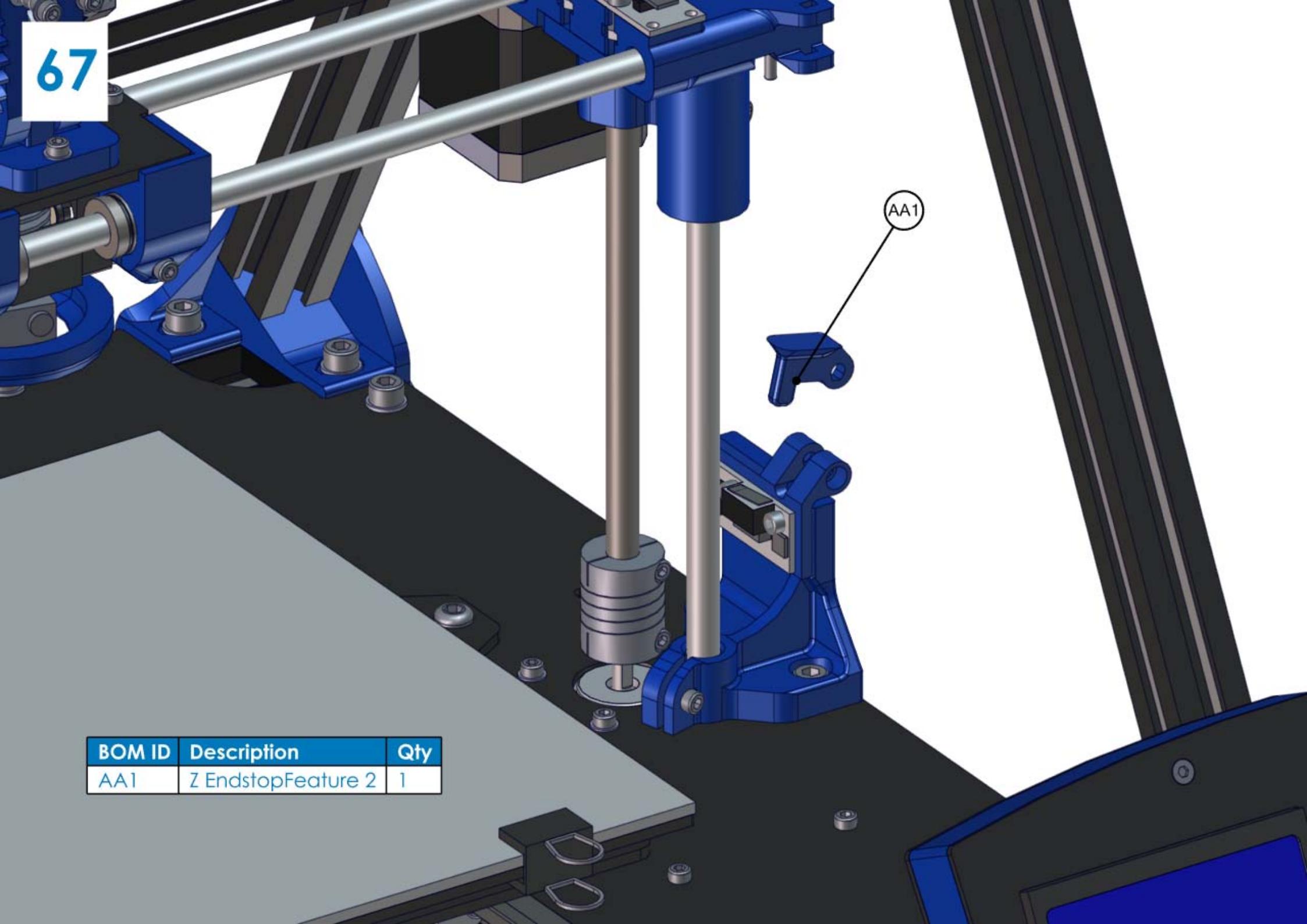


BOM ID	Description	Qty
Z2	DIN912 M3x12	1
Z1	DIN912 M3x12	1

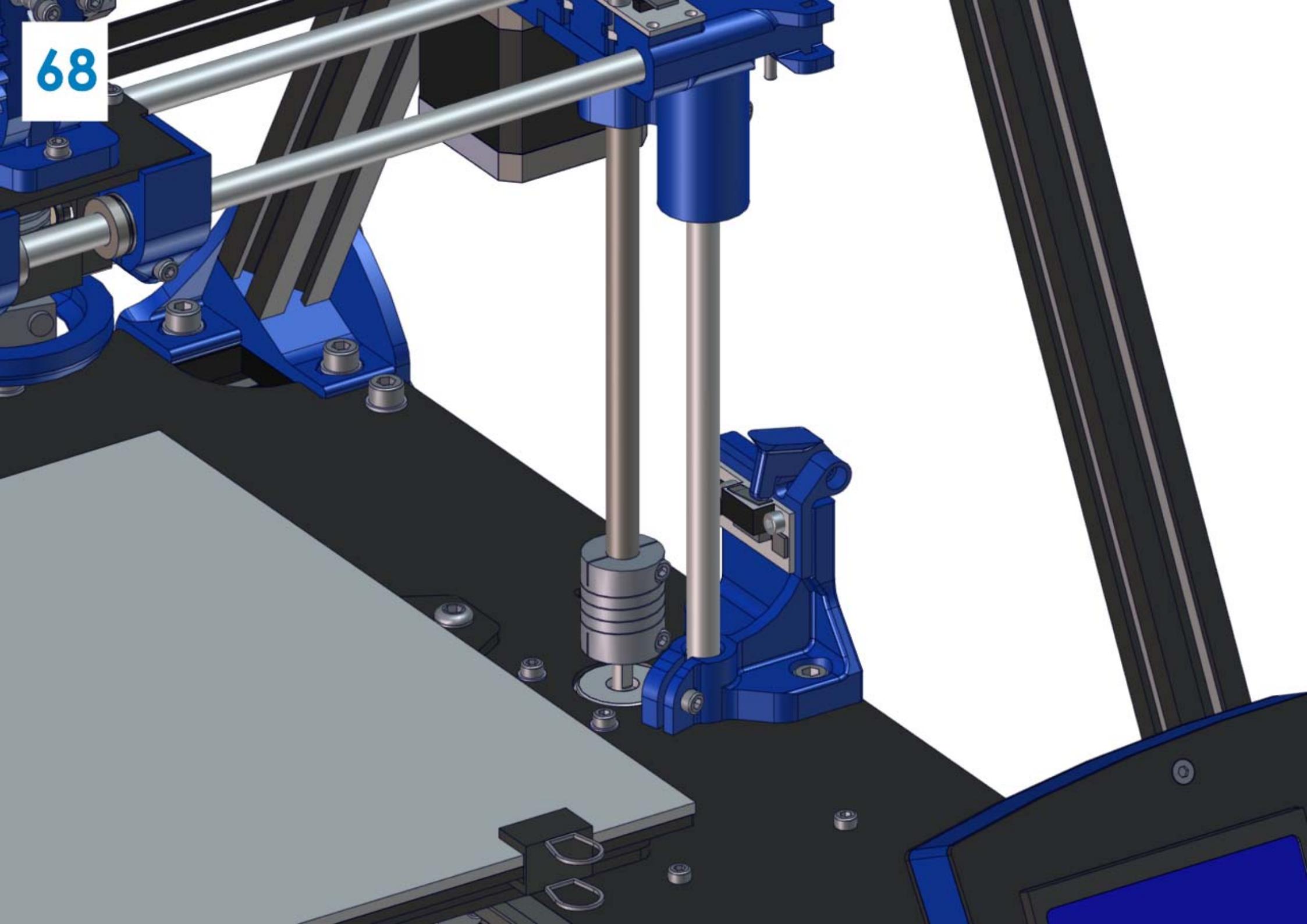
66



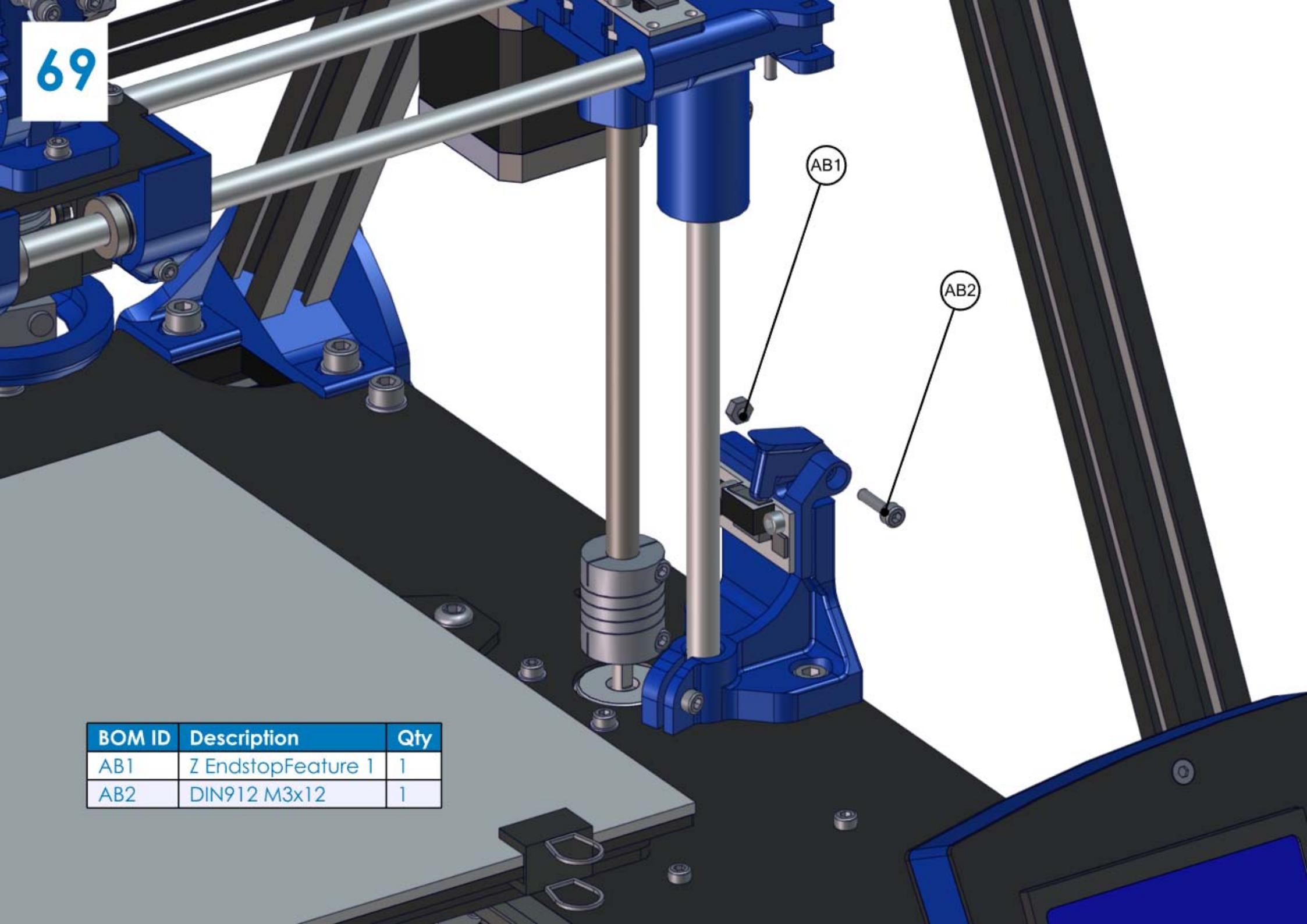
67



68

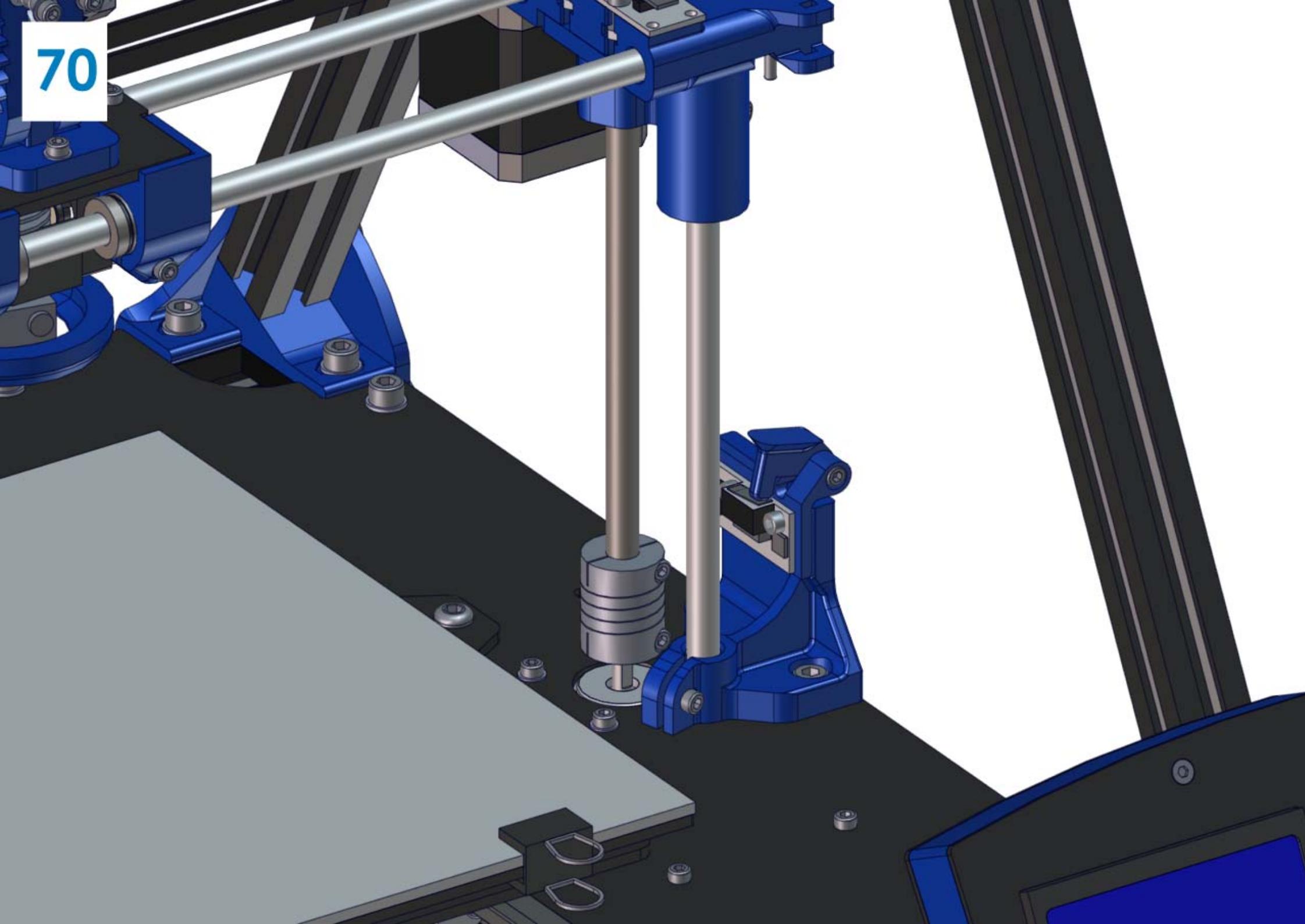


69

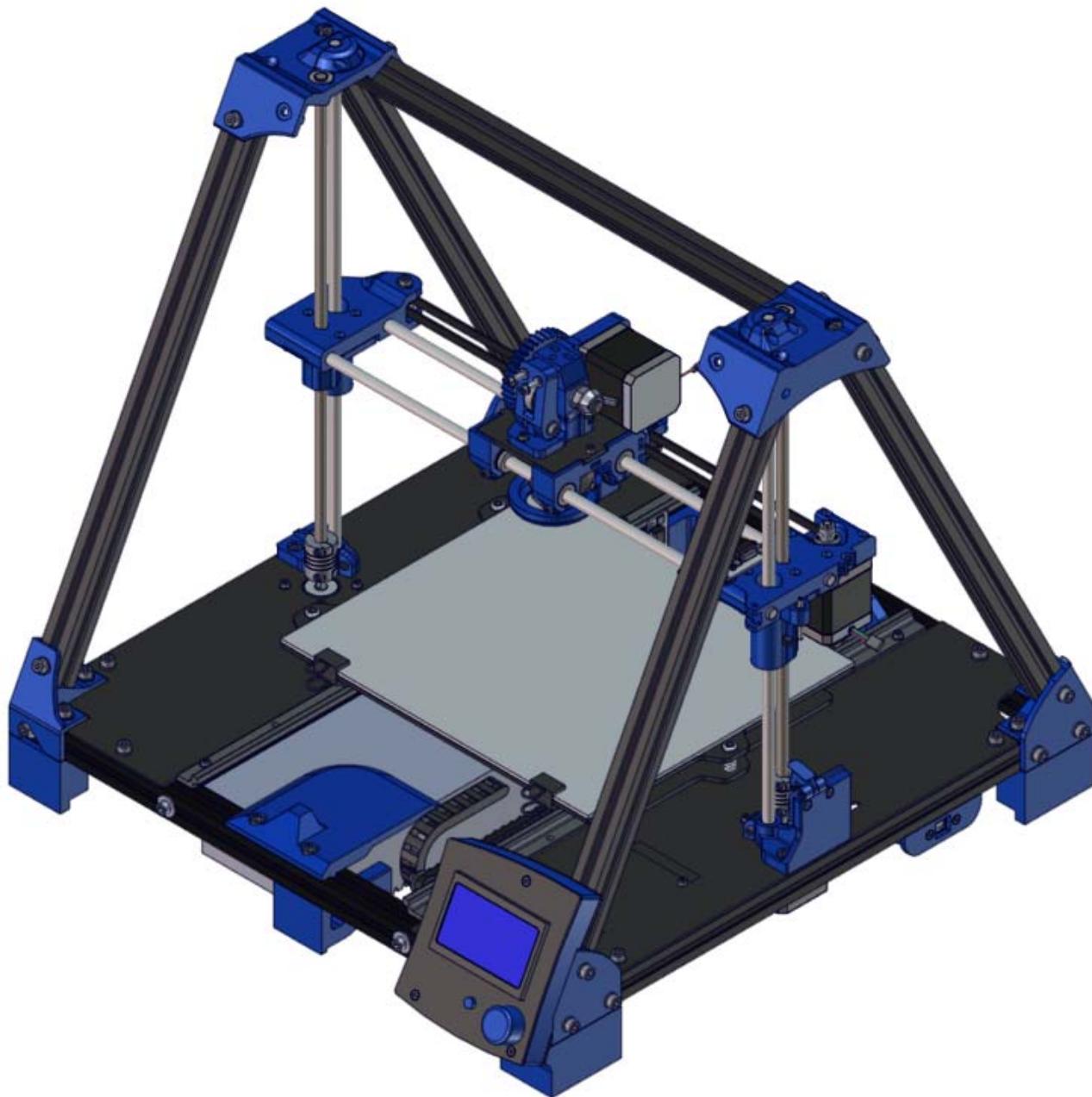


BOM ID	Description	Qty
AB1	Z EndstopFeature 1	1
AB2	DIN912 M3x12	1

70



71



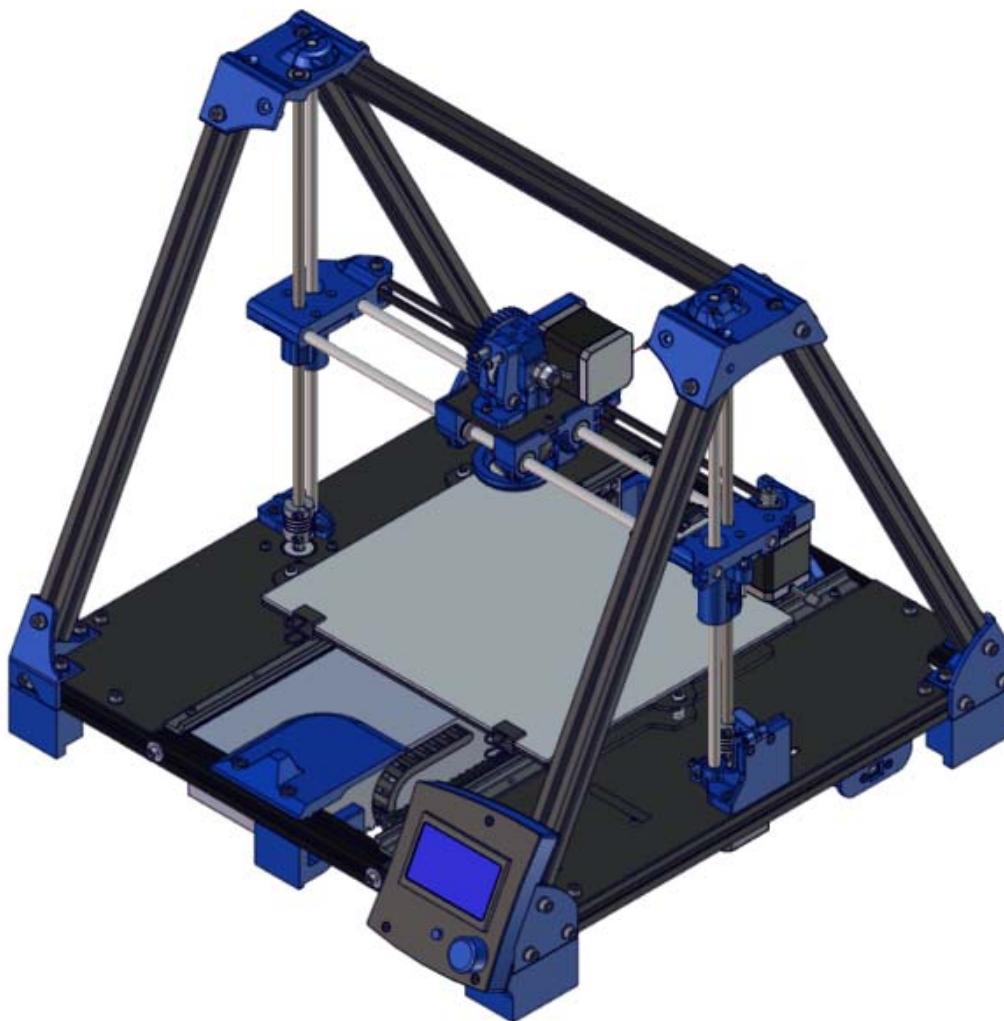


To accommodate the large syringe of the Paste extruder you will need to rise the Z axis using the printer menu.

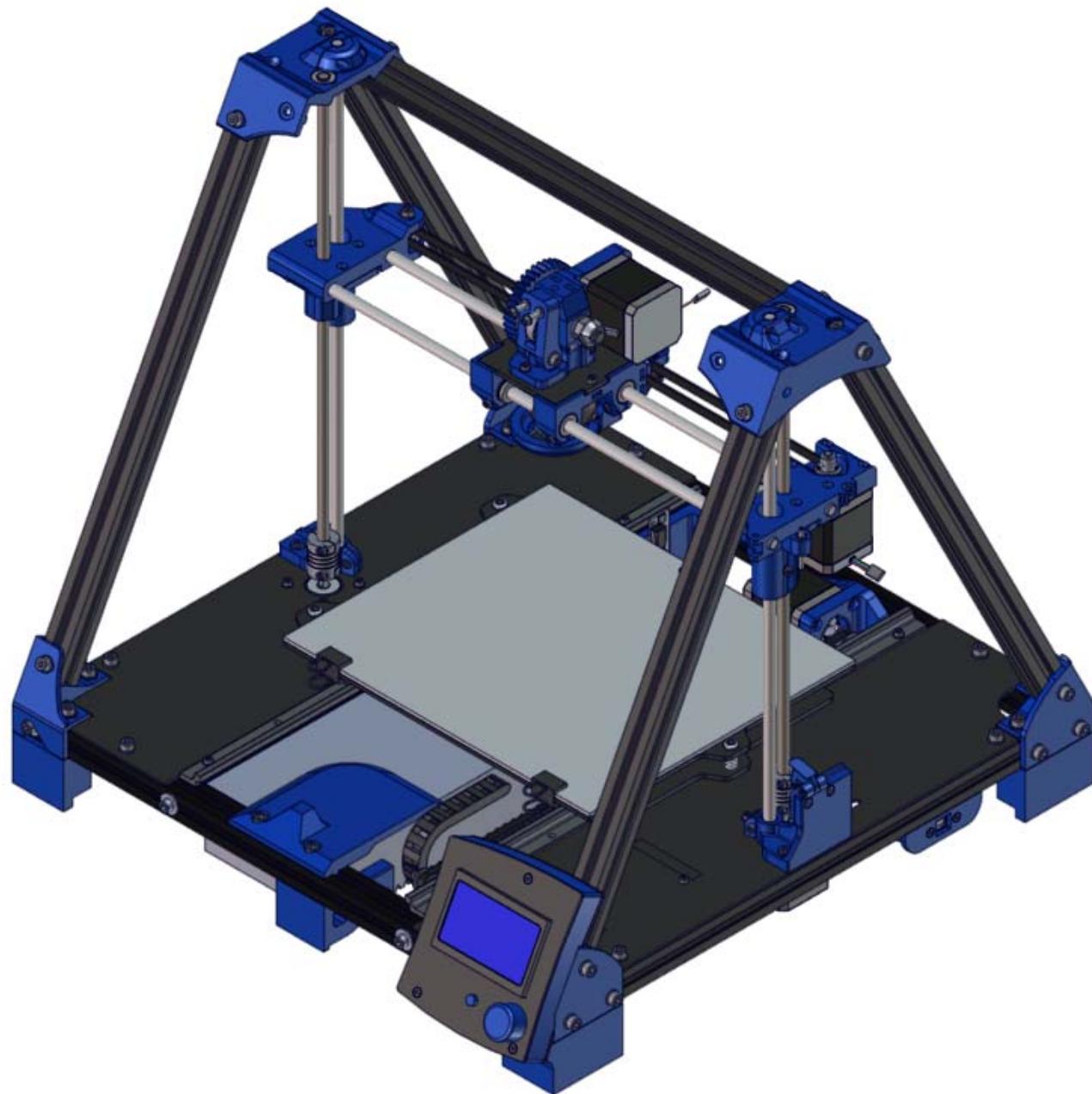
To do this connect the printer and enter the menu:

Prepare> Auto home and then:

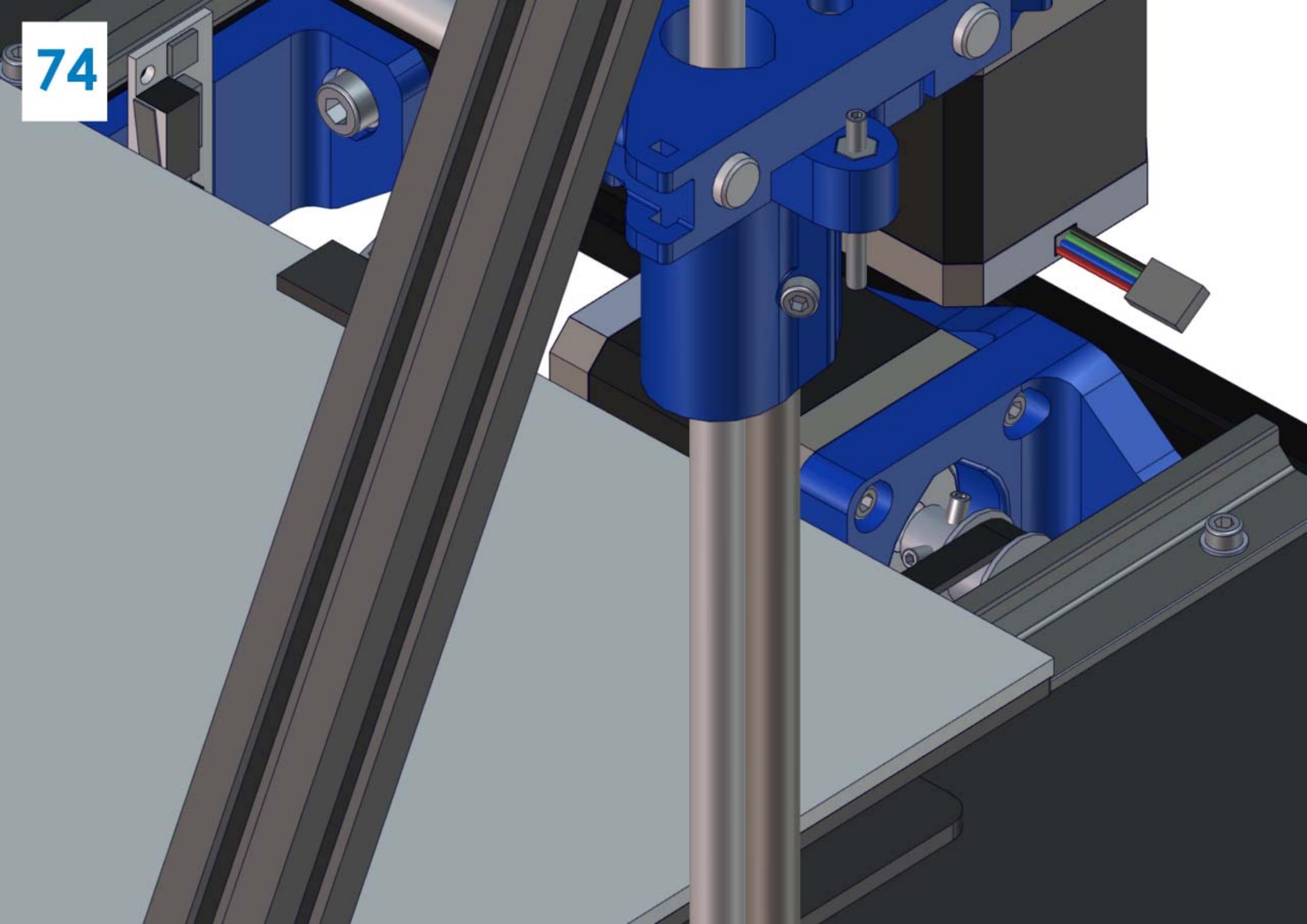
Prepare> Move Axis> 1mm Move> Move Z and introduce Z: +140.00



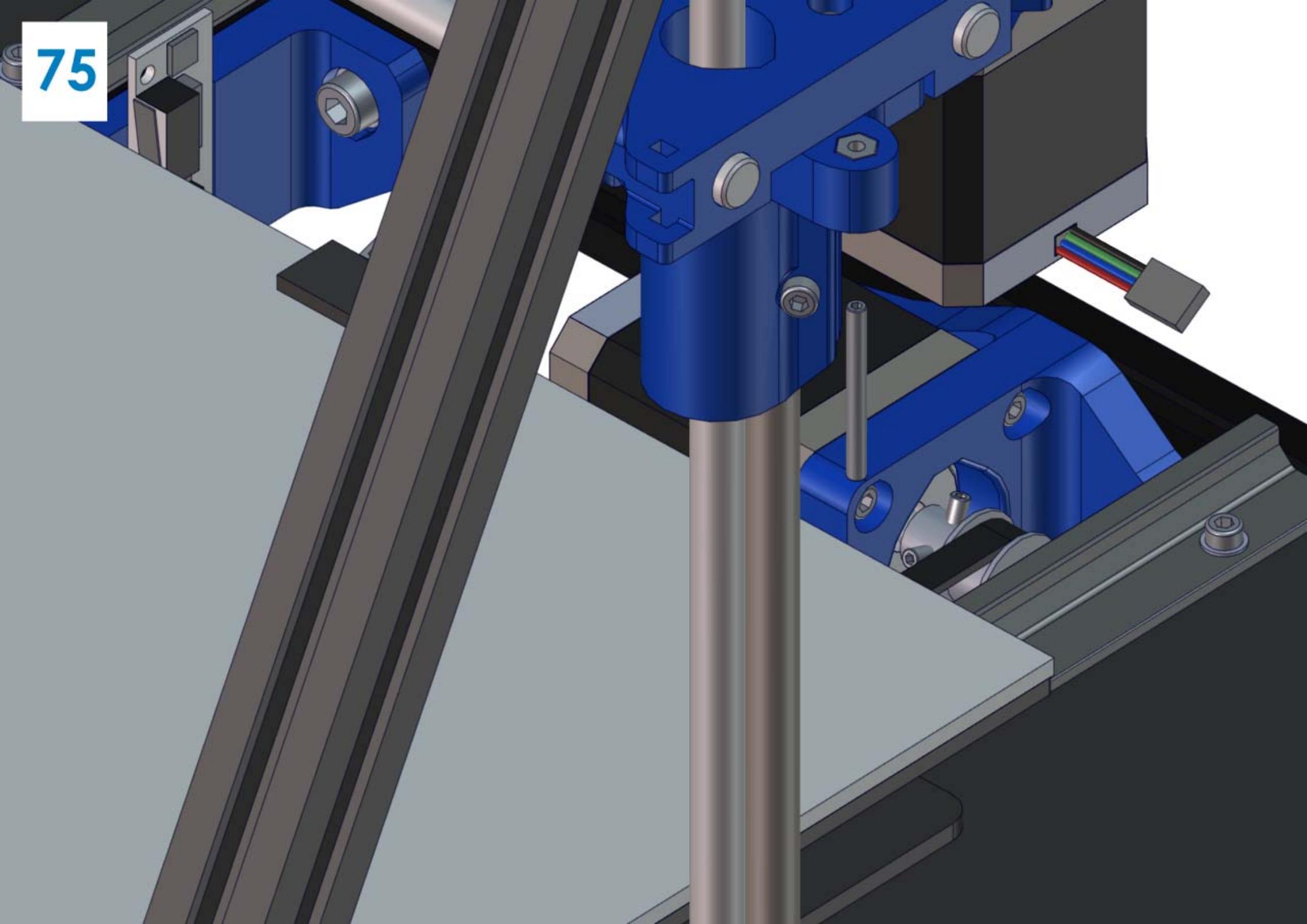
73



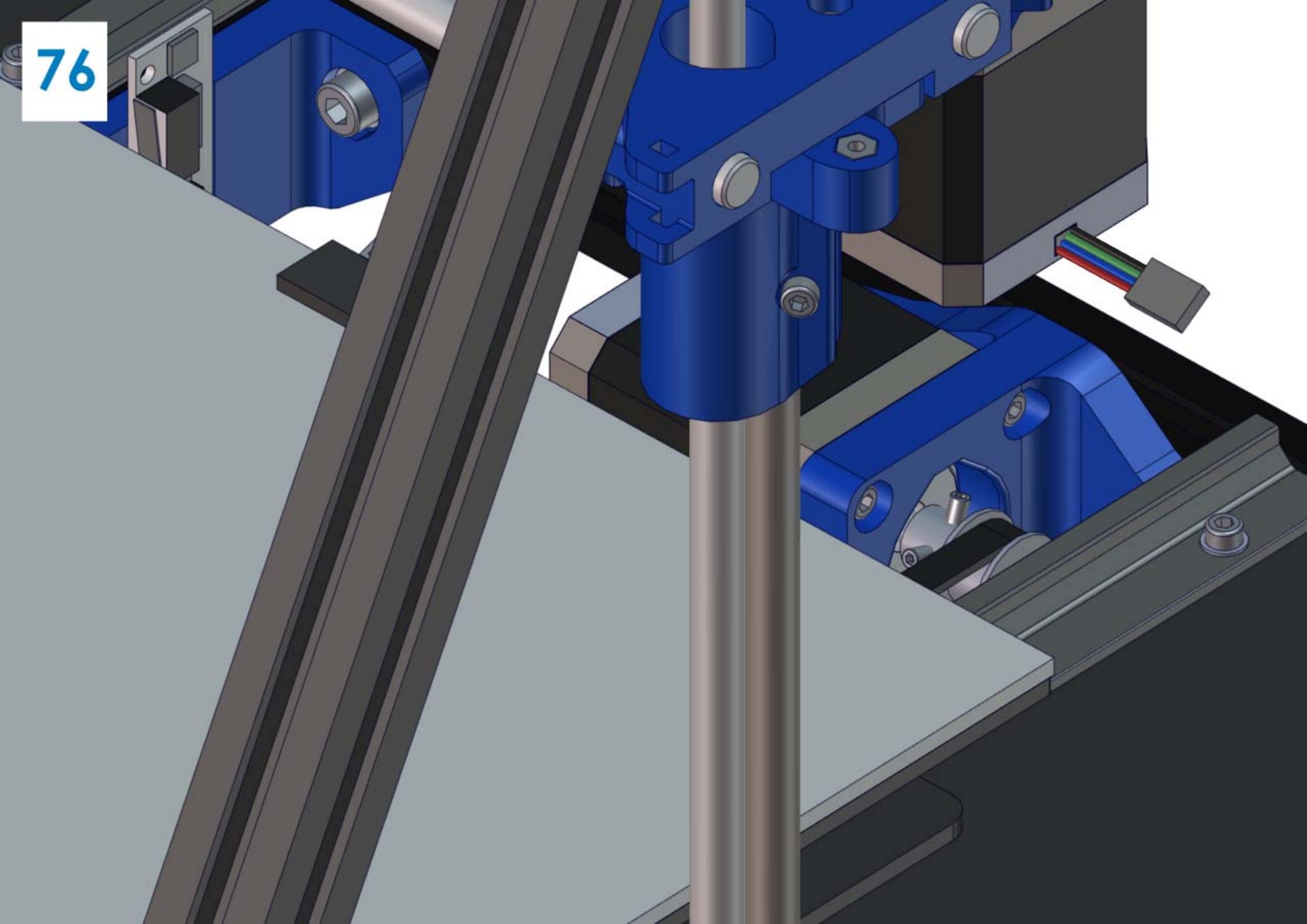
74

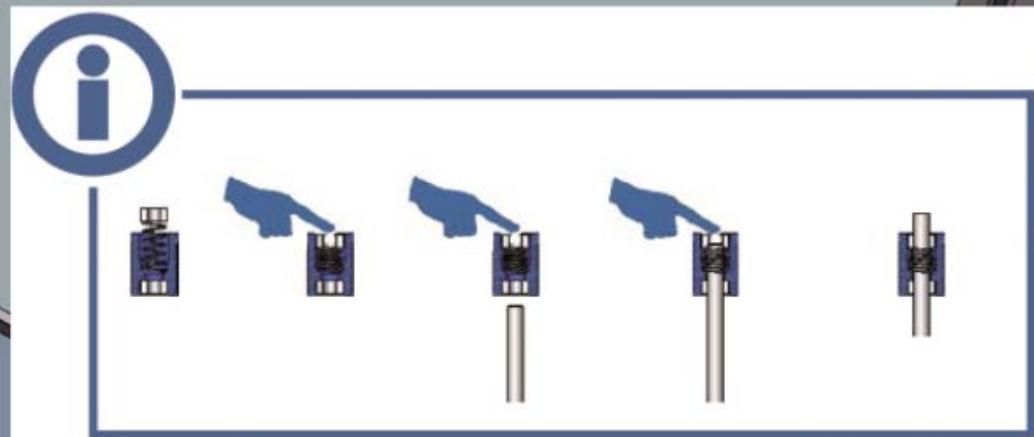


75



76

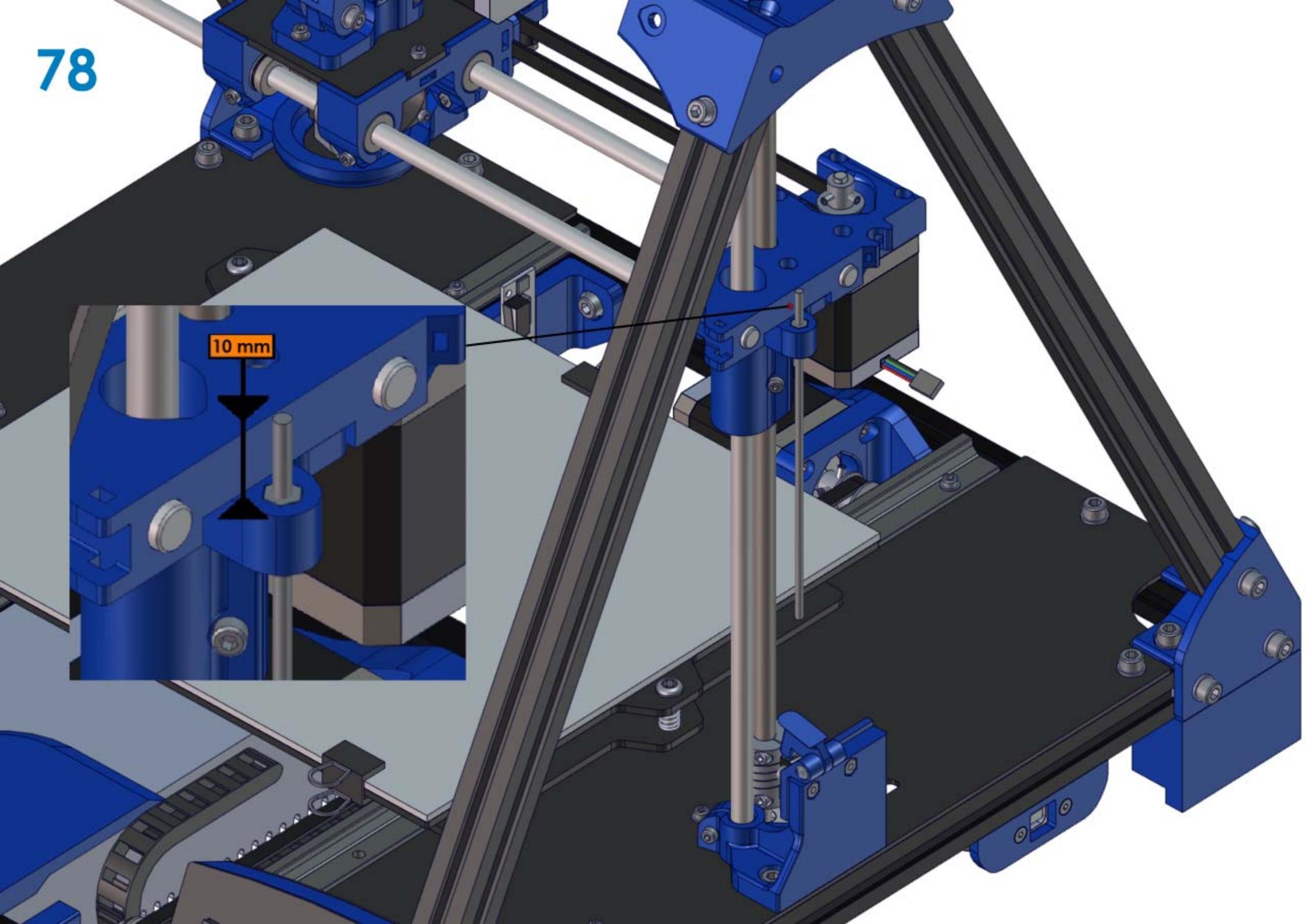




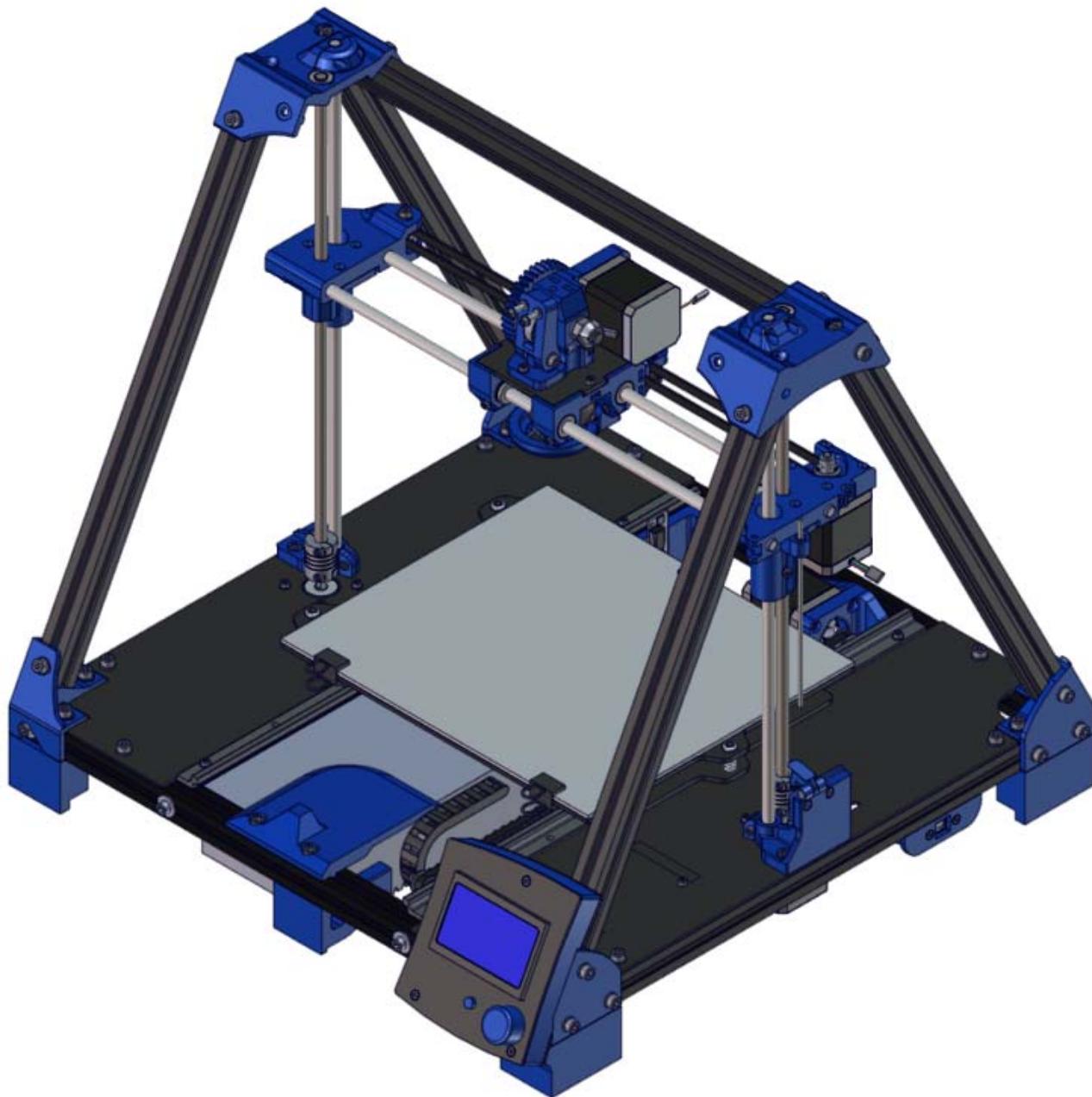
AC1

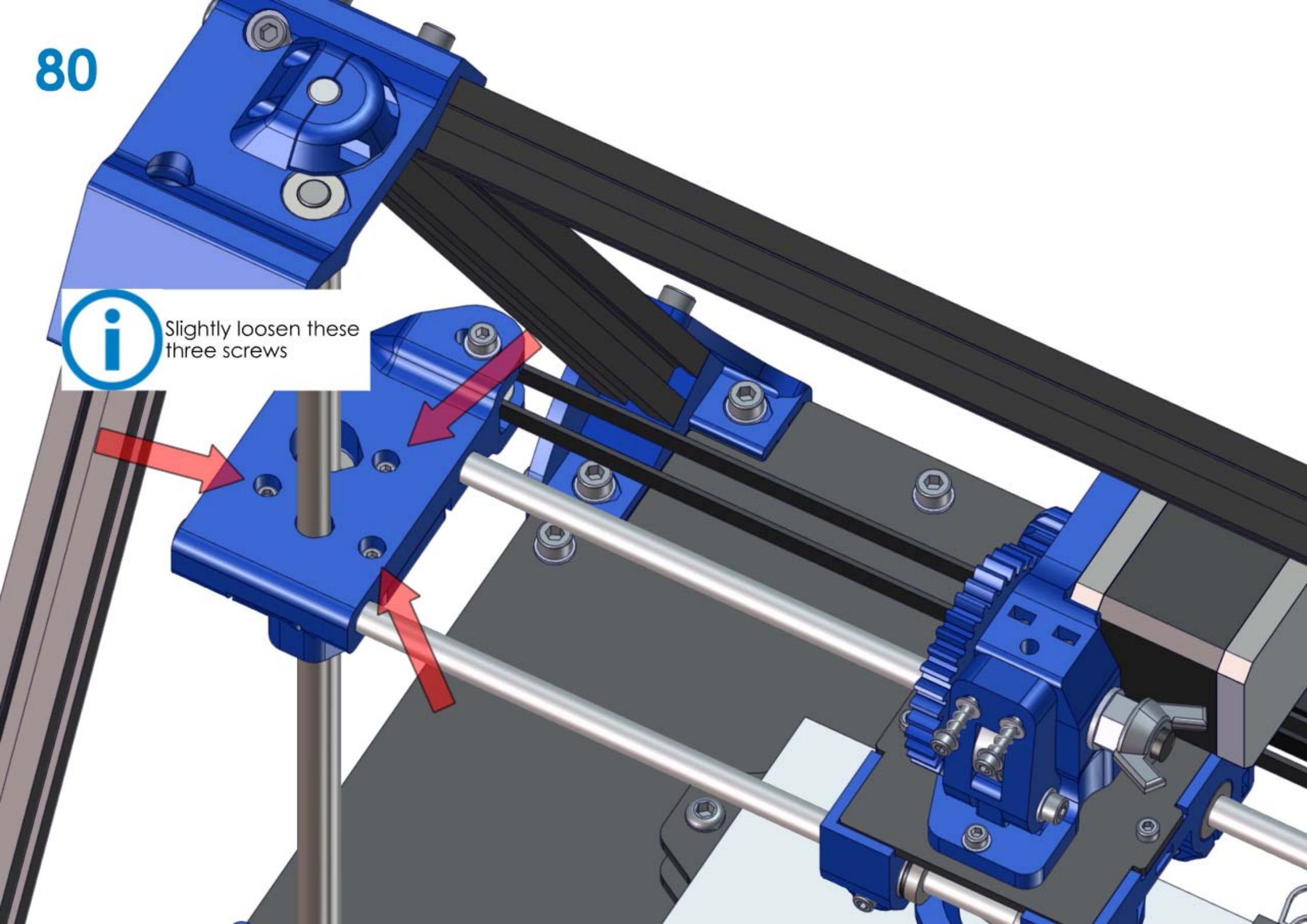
BOM ID	Description	Qty
AC1	Threaded rod M3x140	1

78



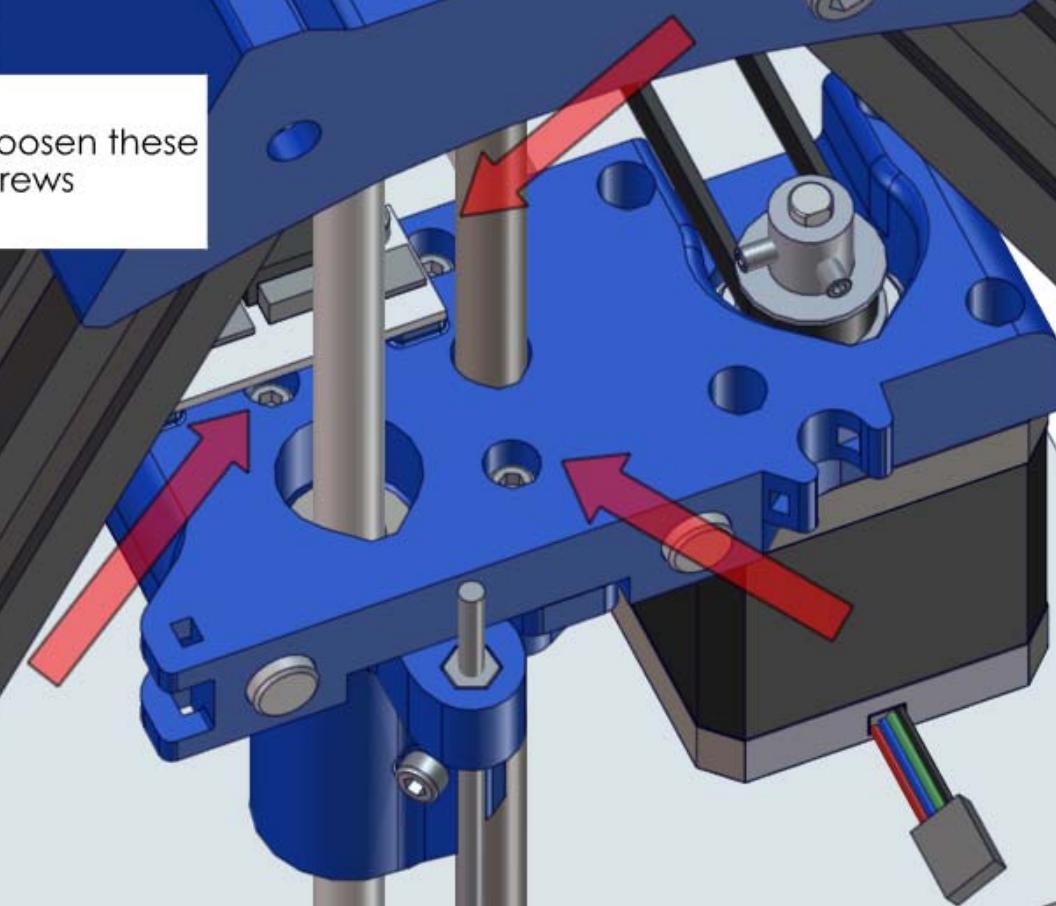
79

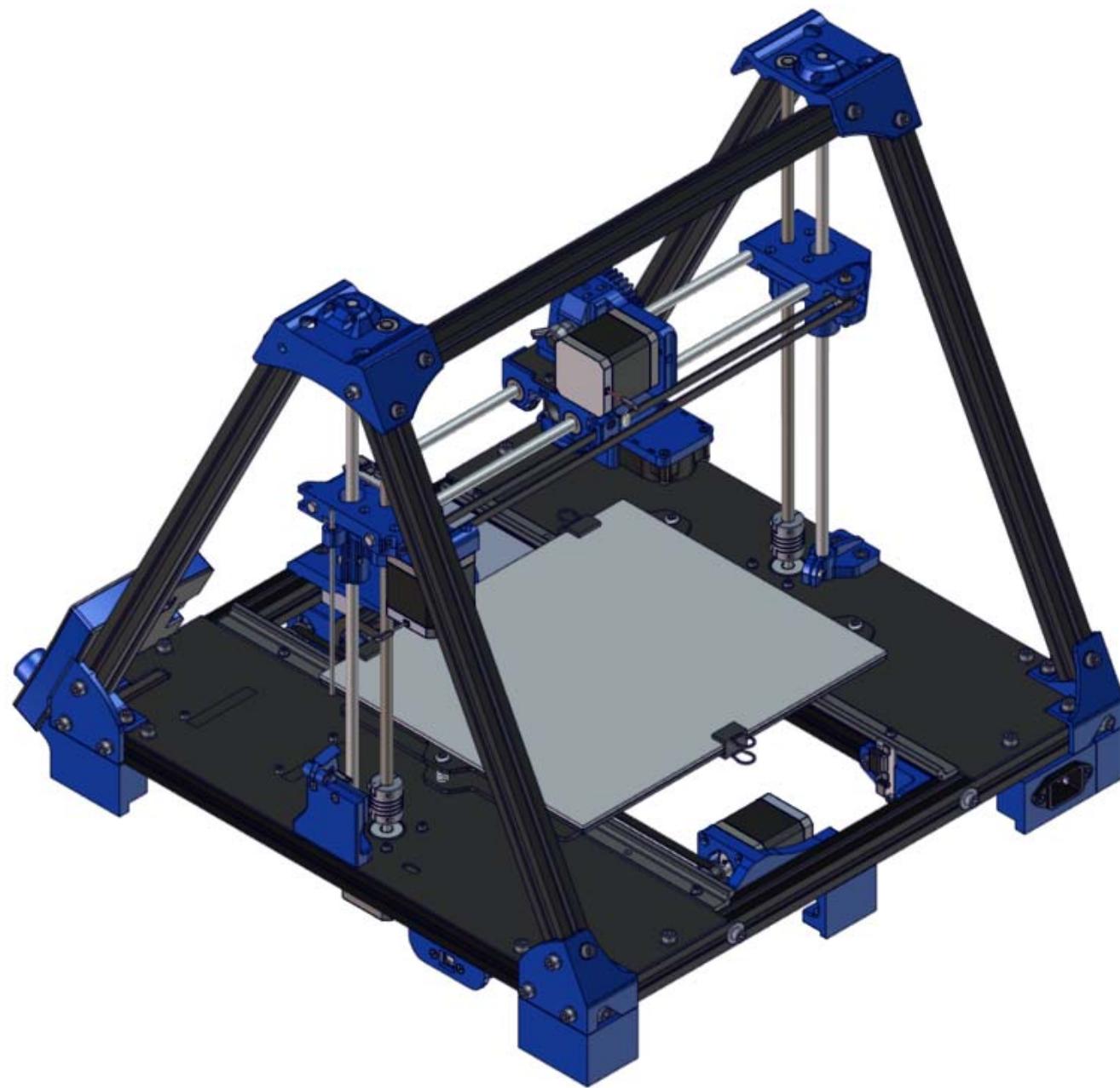




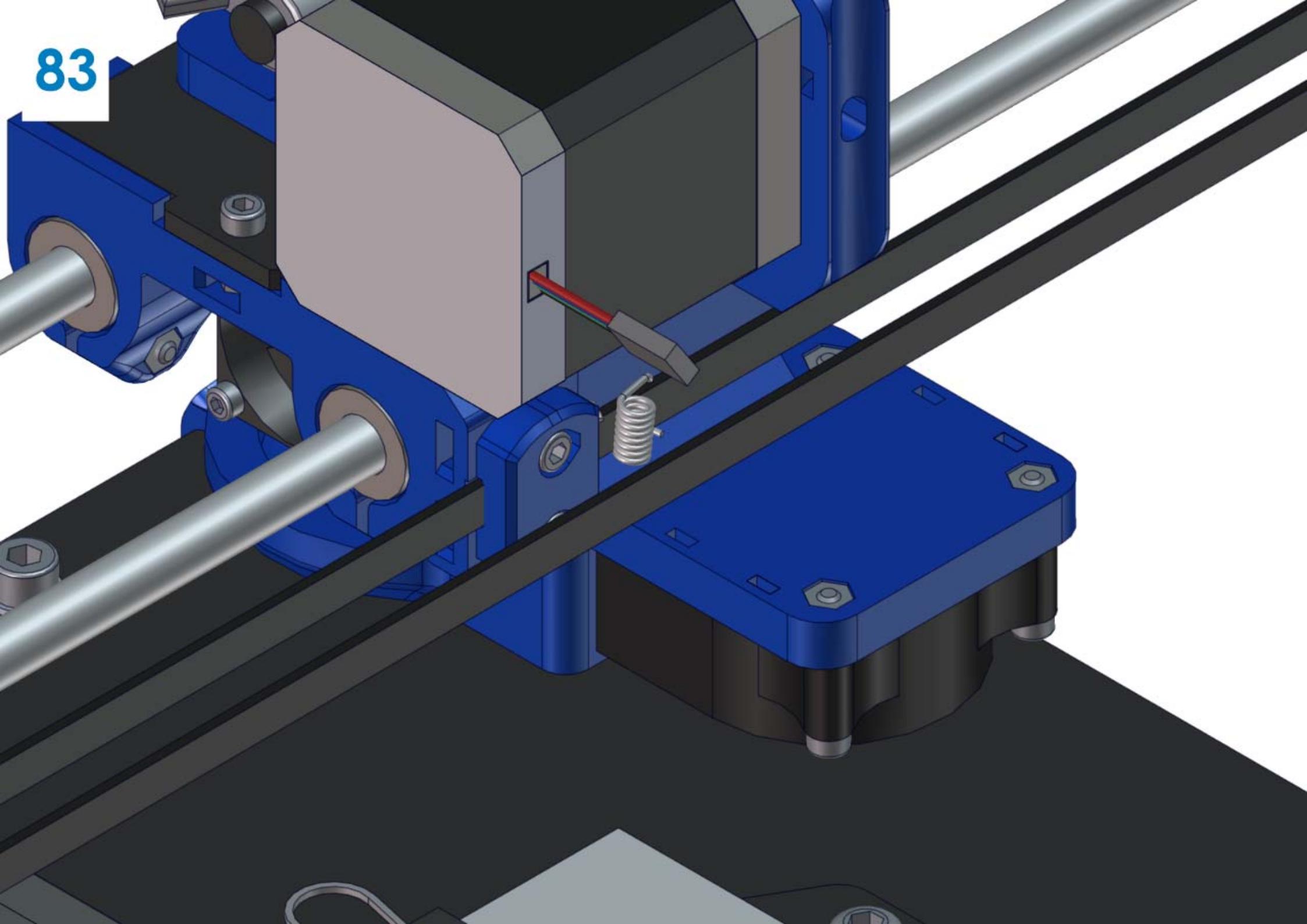


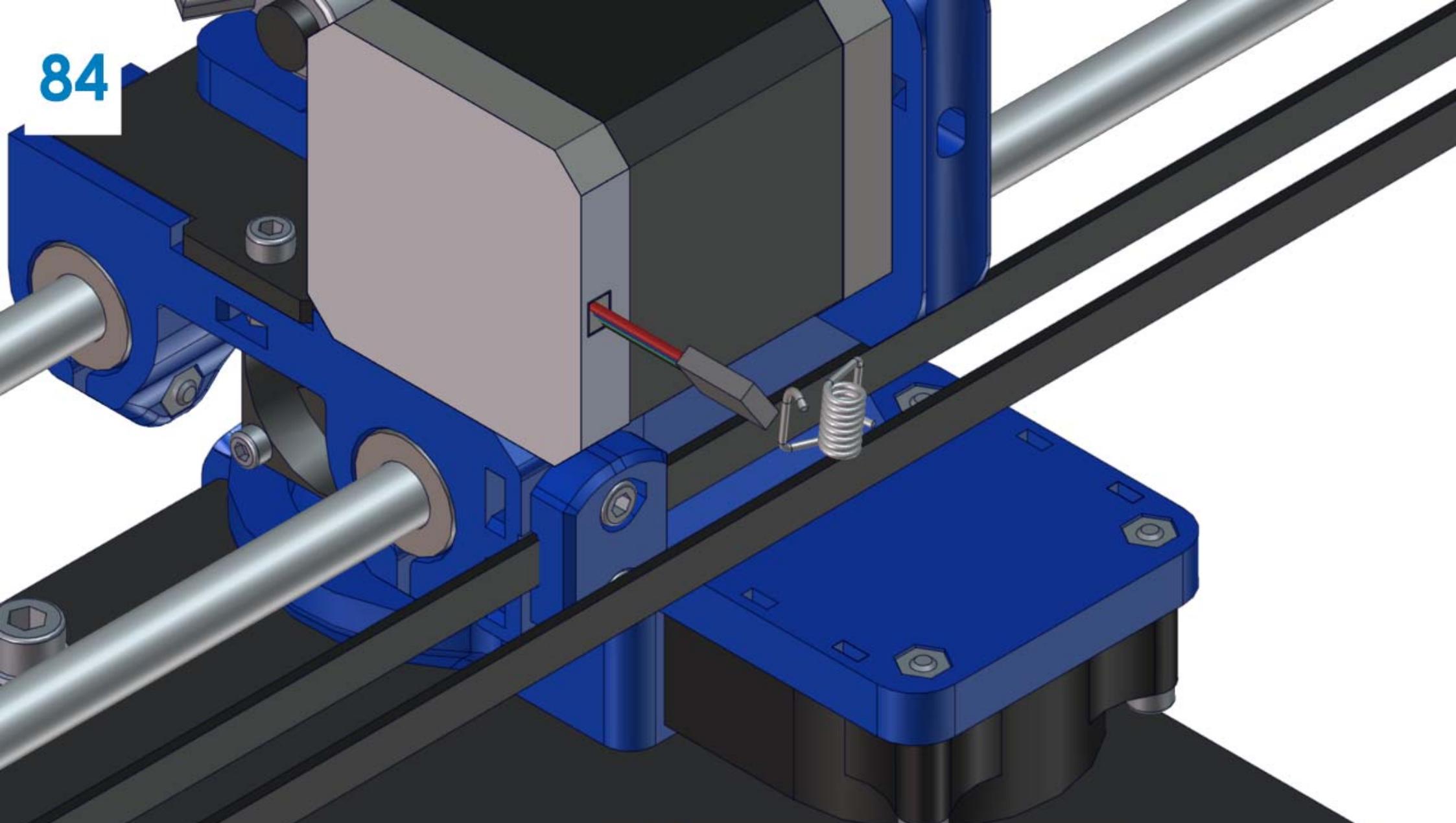
Slightly loosen these
three screws





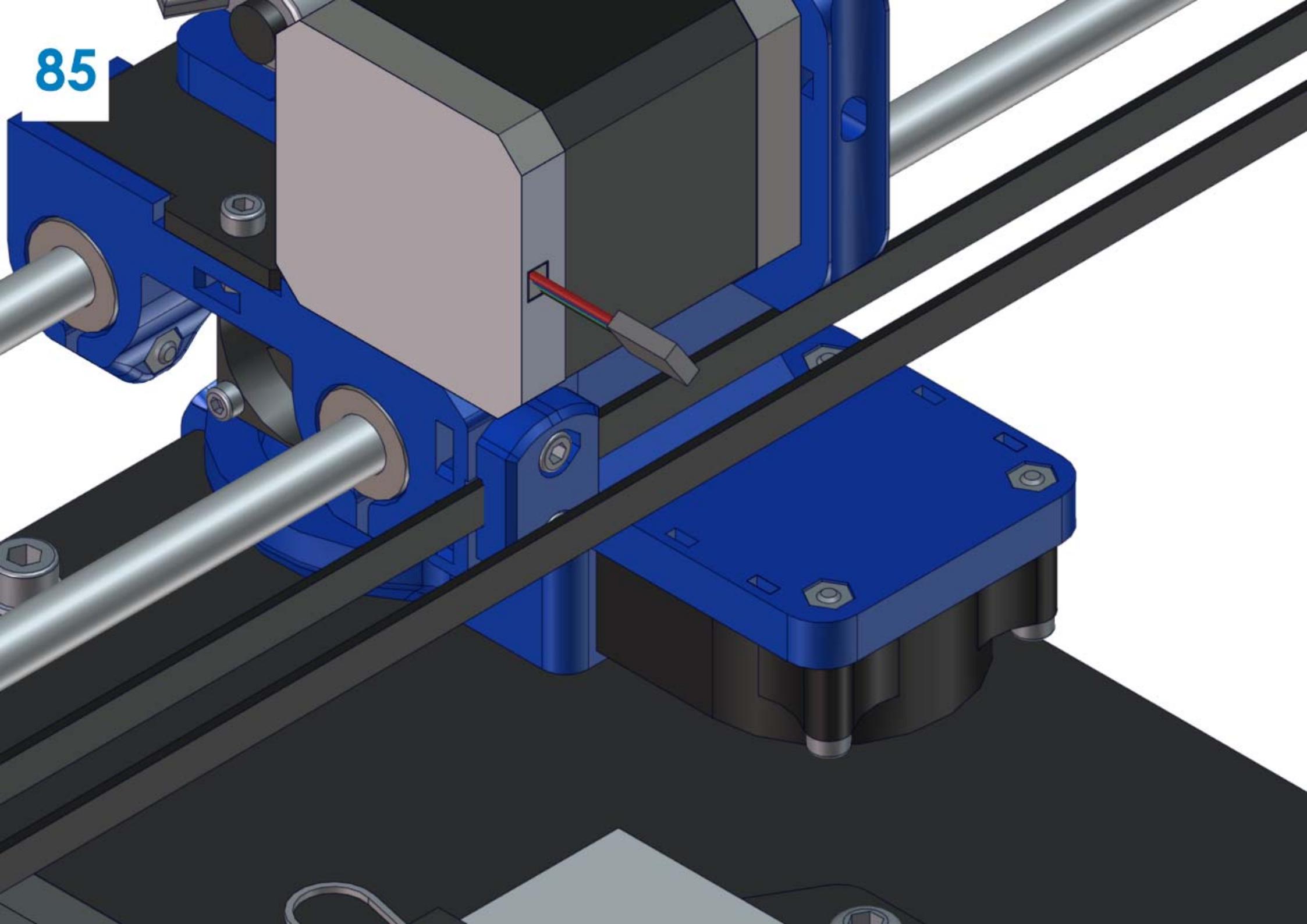
83

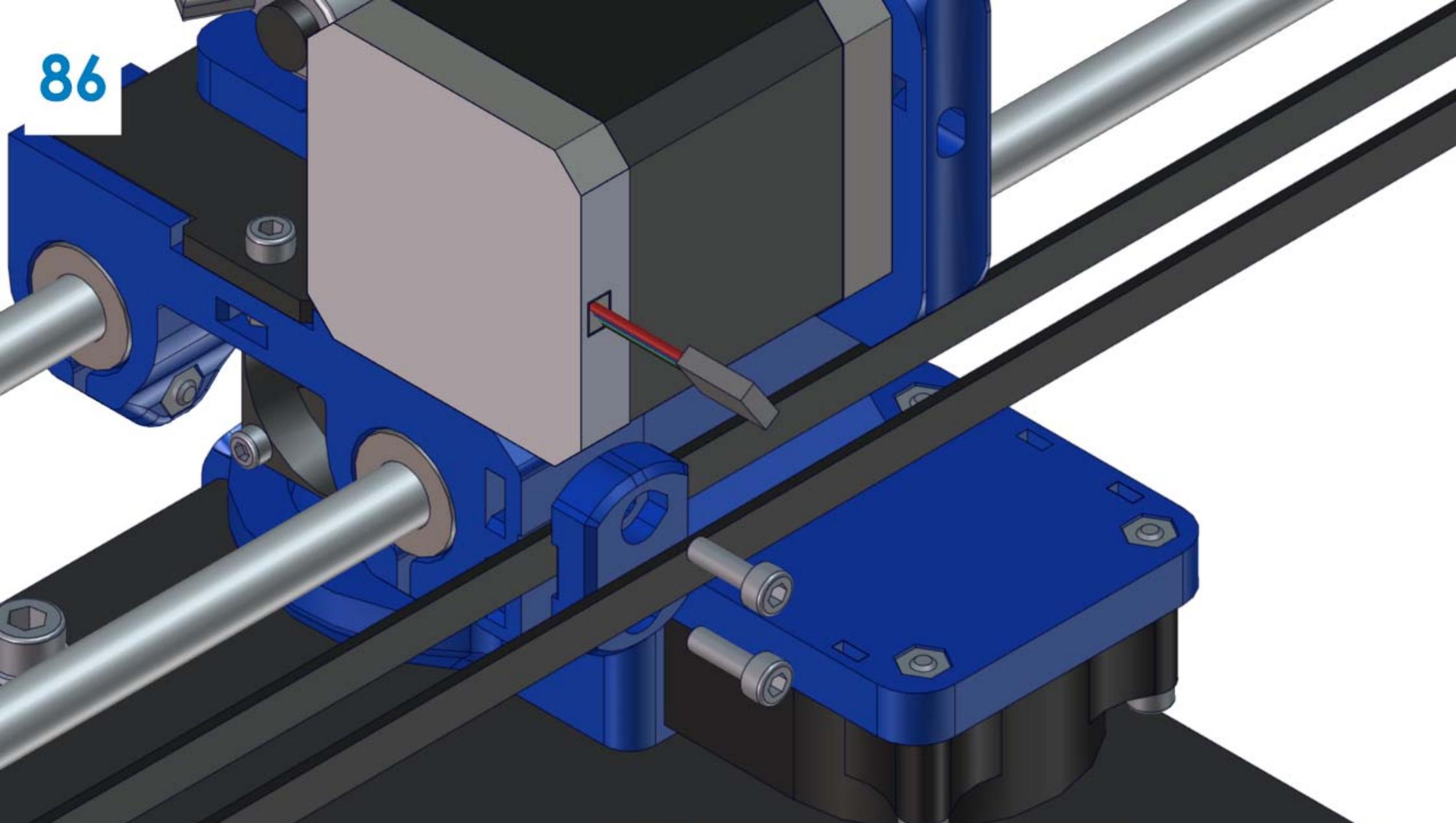




This tension spring will be needed later on when changing the carriage for the Paste extruder carriage.

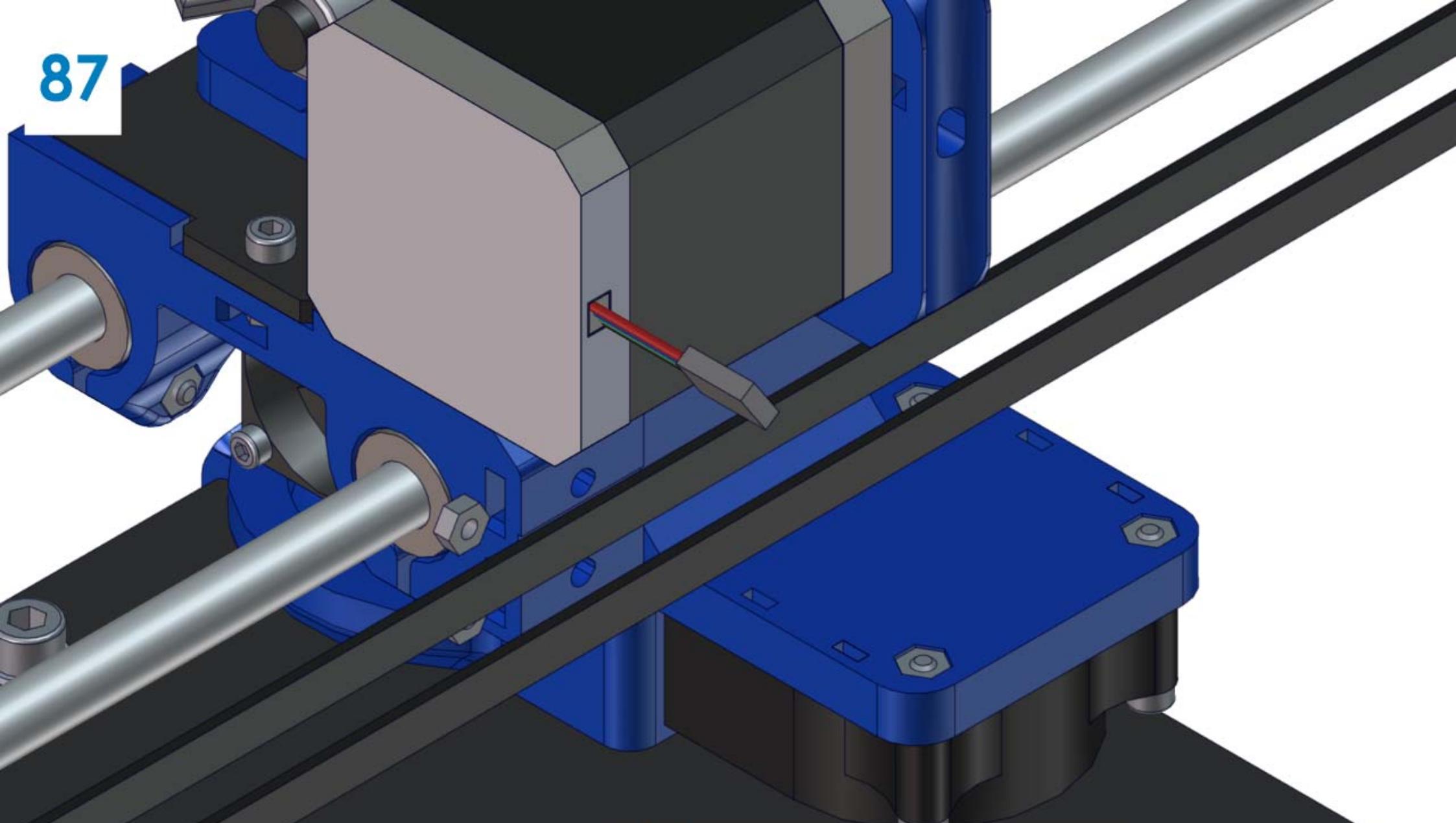
85





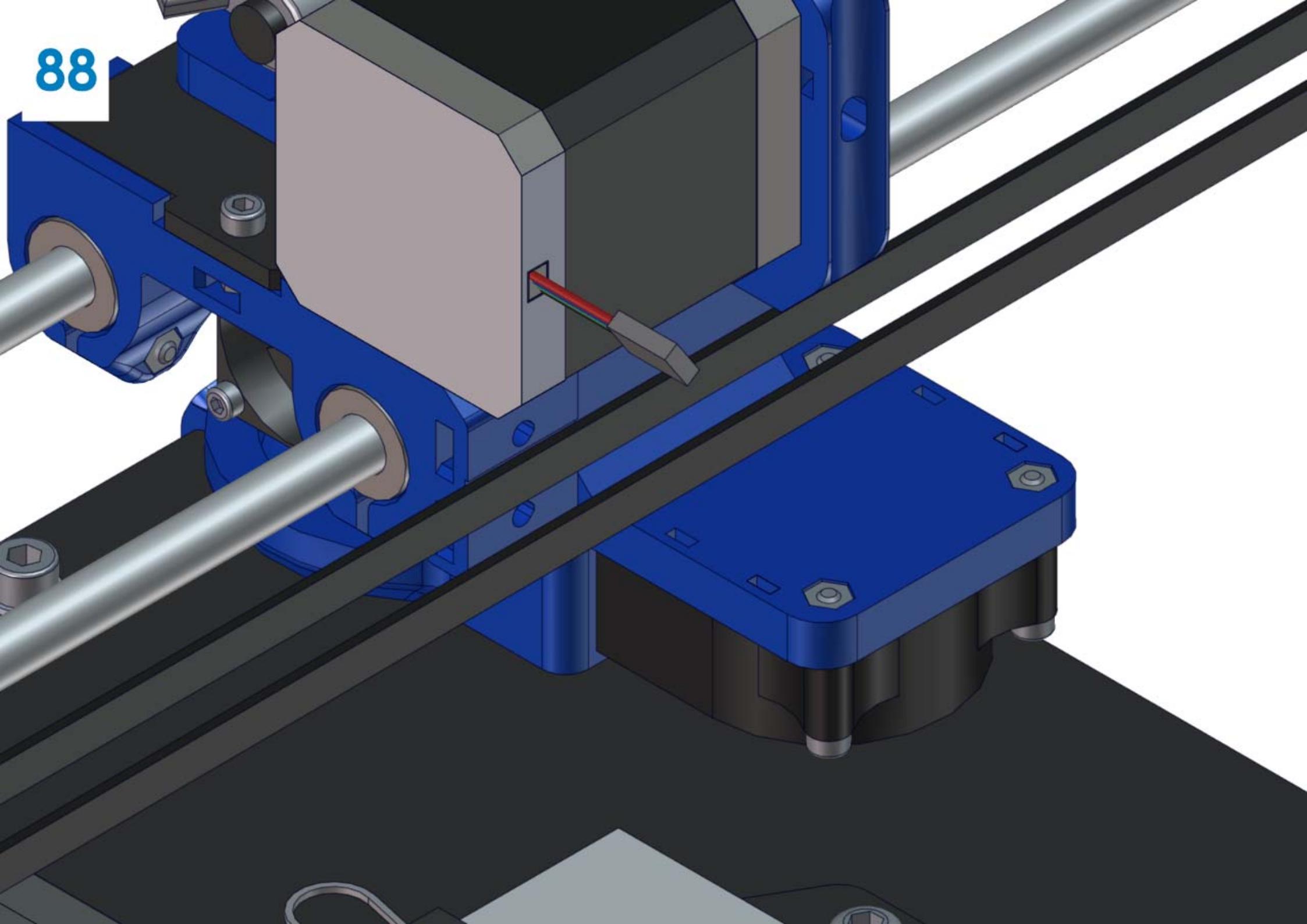
These two screws will be needed later on when changing the carriage for the Paste extruder carriage.

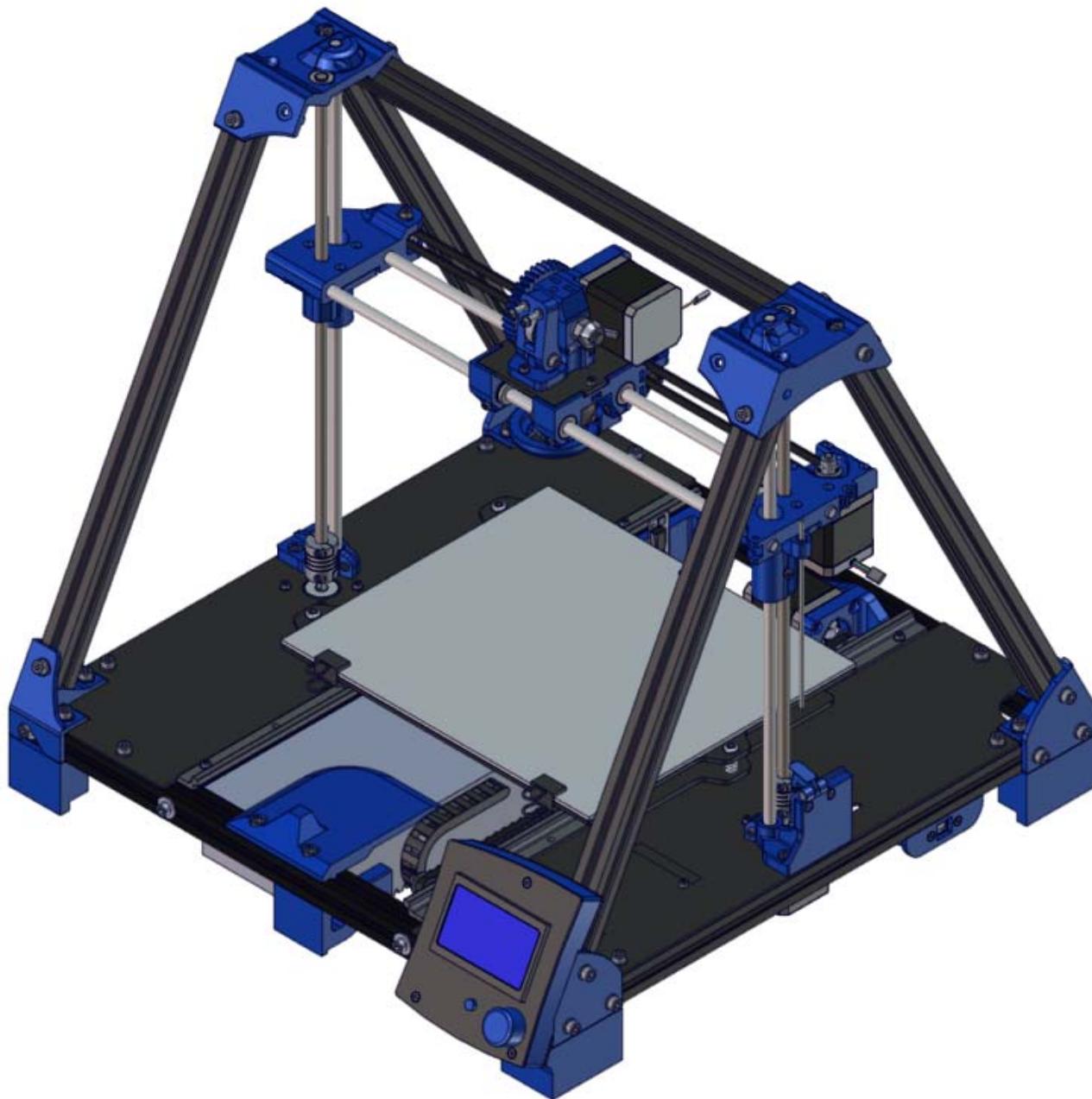
87



These two nuts will be needed
later on when changing the carriage
for the Paste extruder carriage.

88



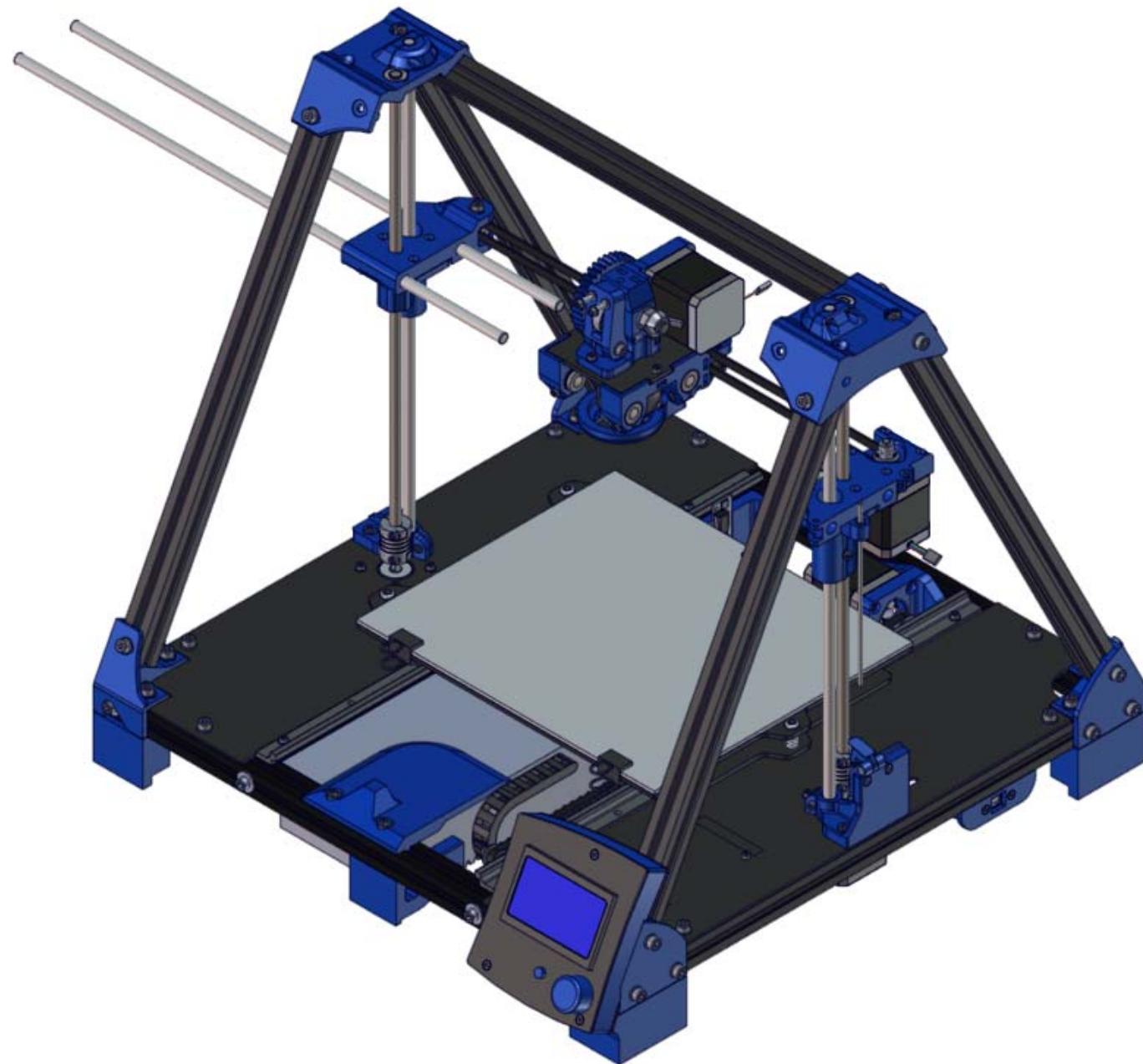


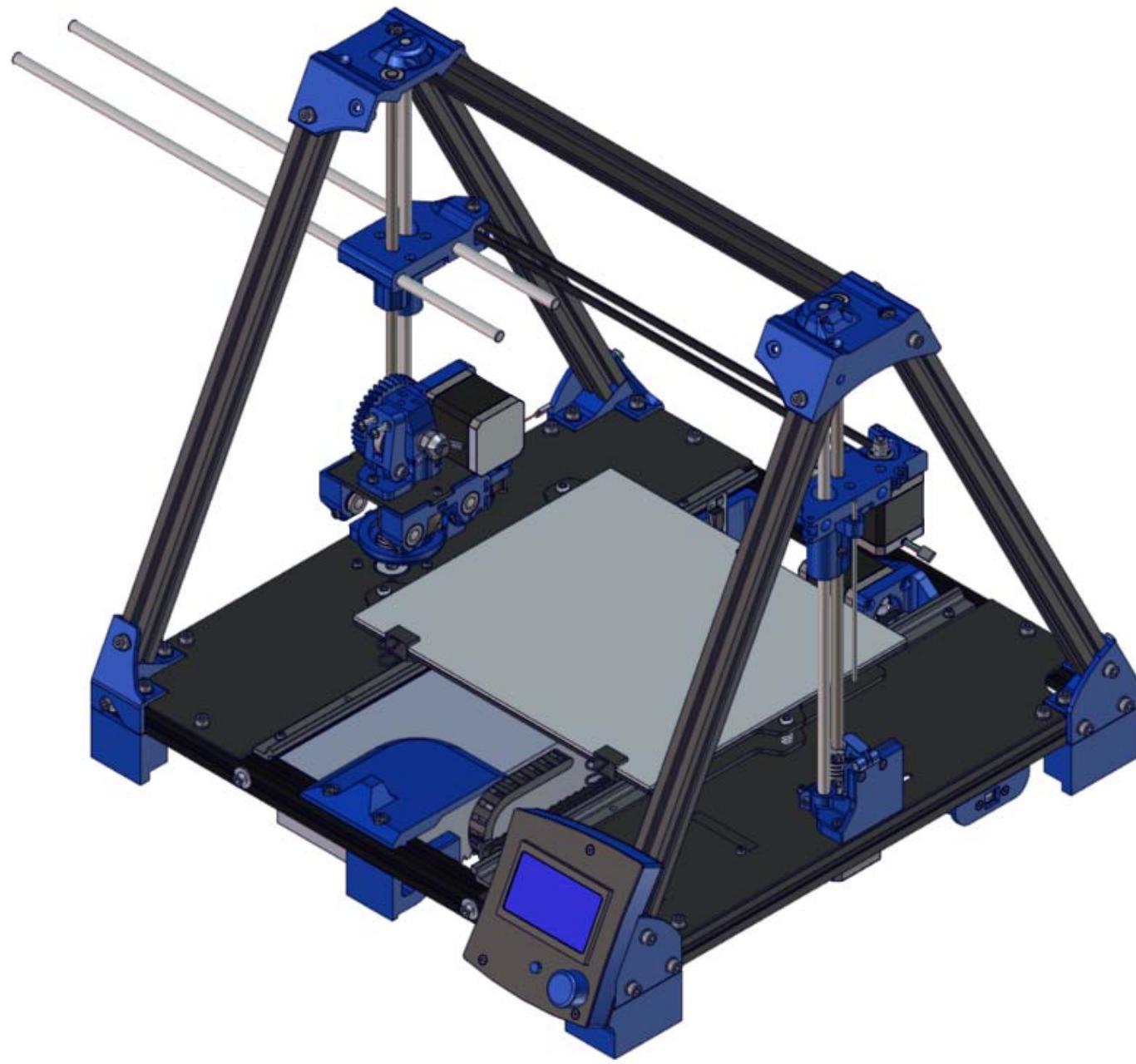
90



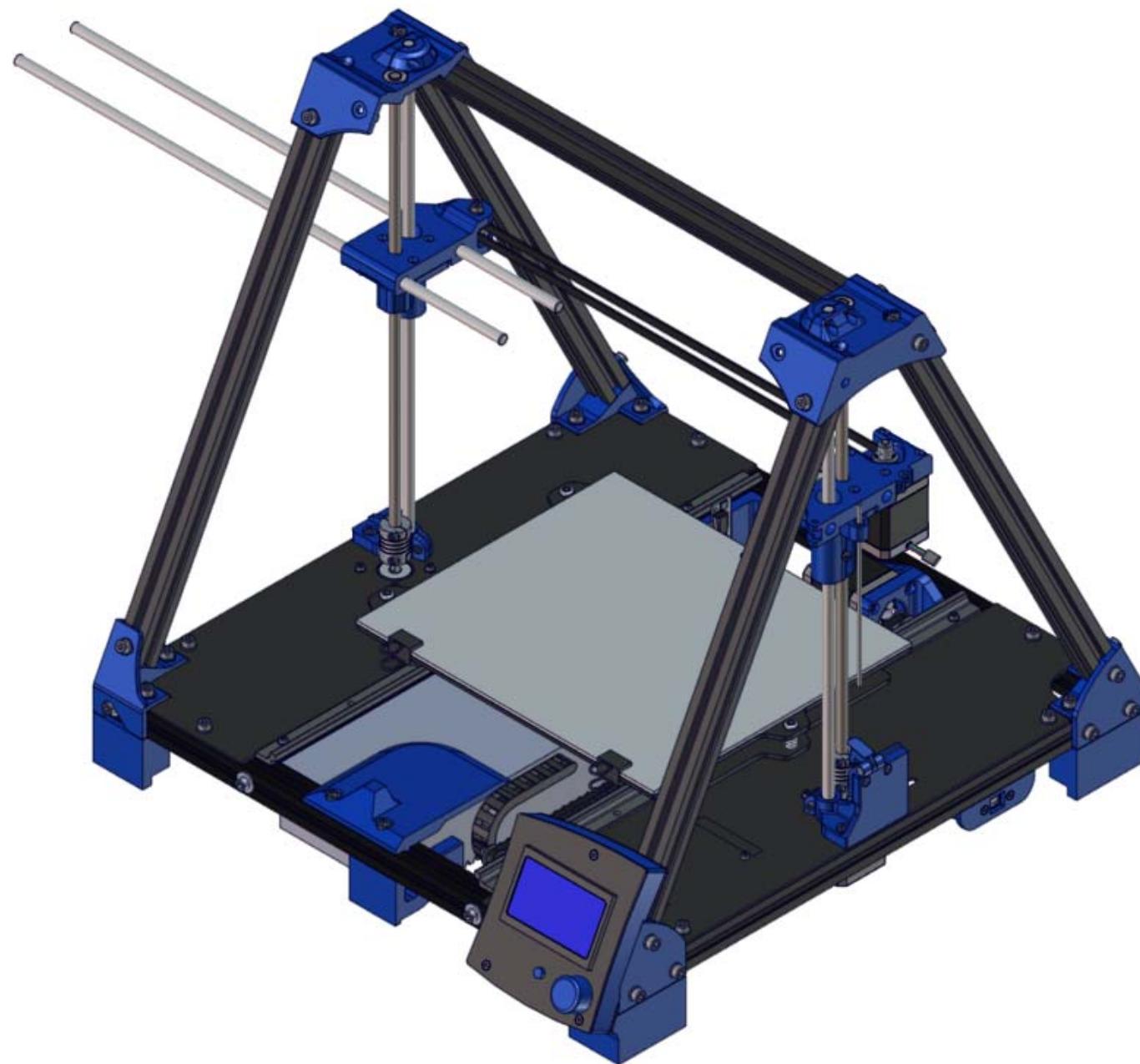
We proceed to disconnect the connector of the engine, the extruder and the two fan connectors.

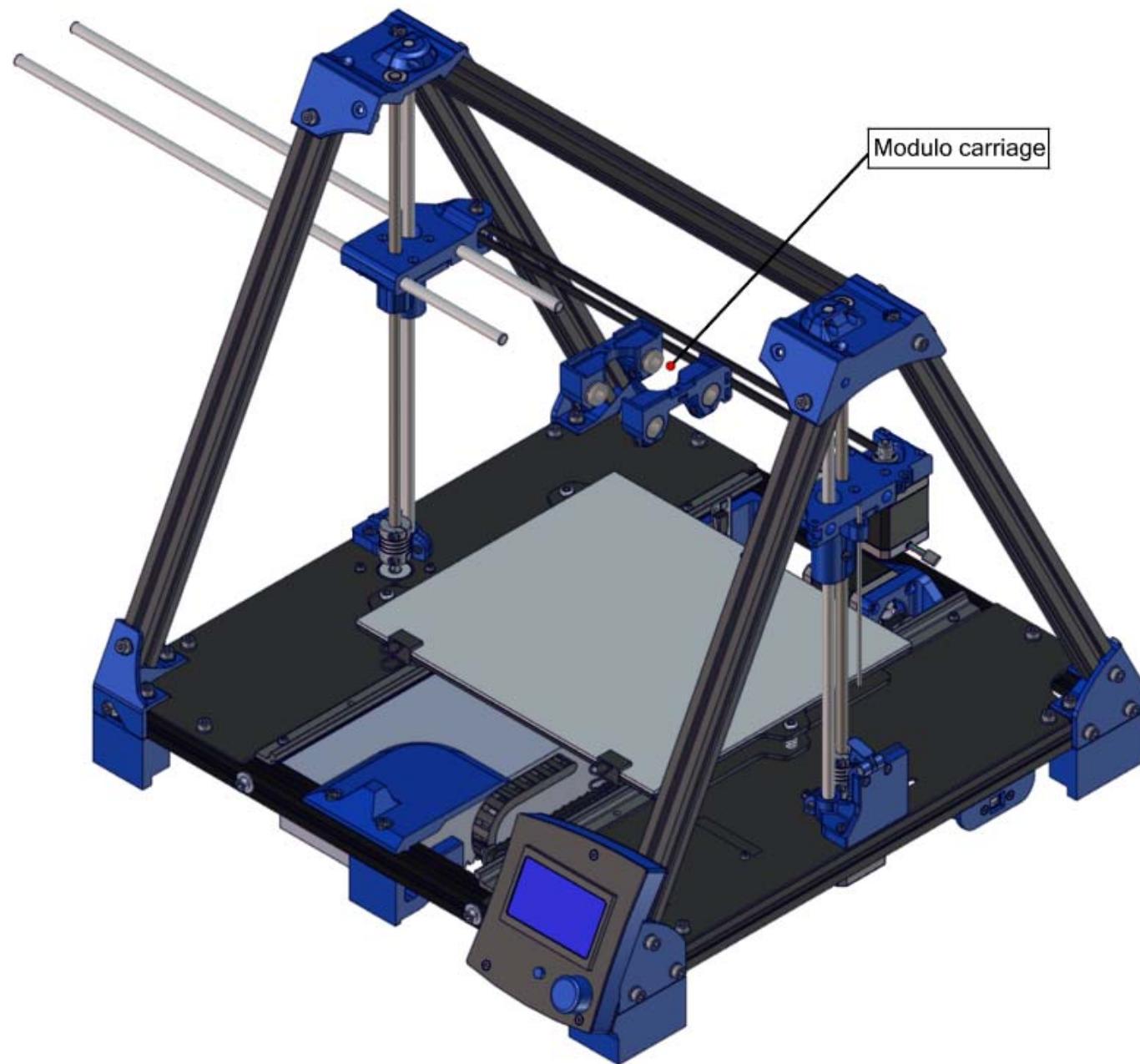




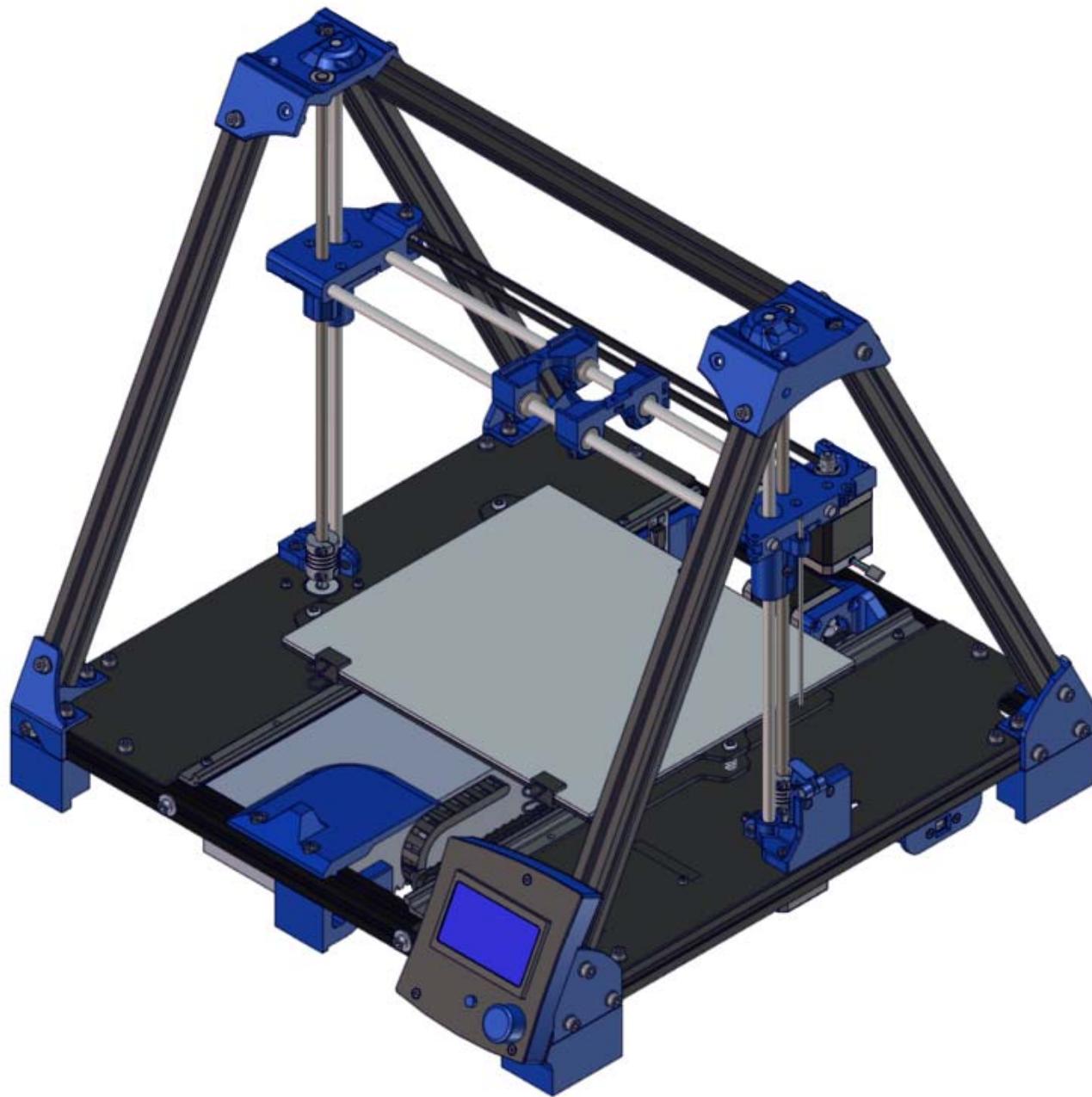


93





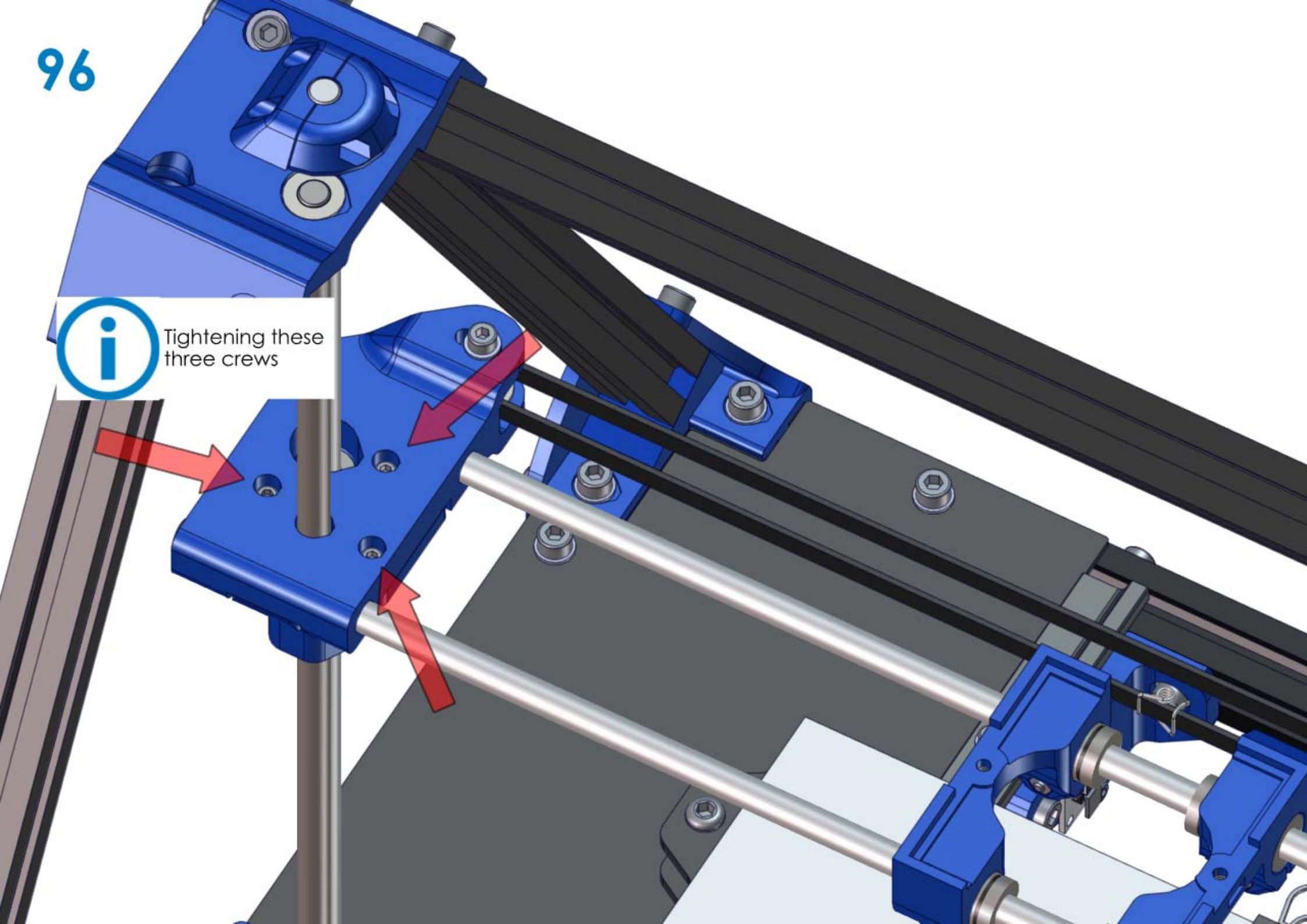
95



96

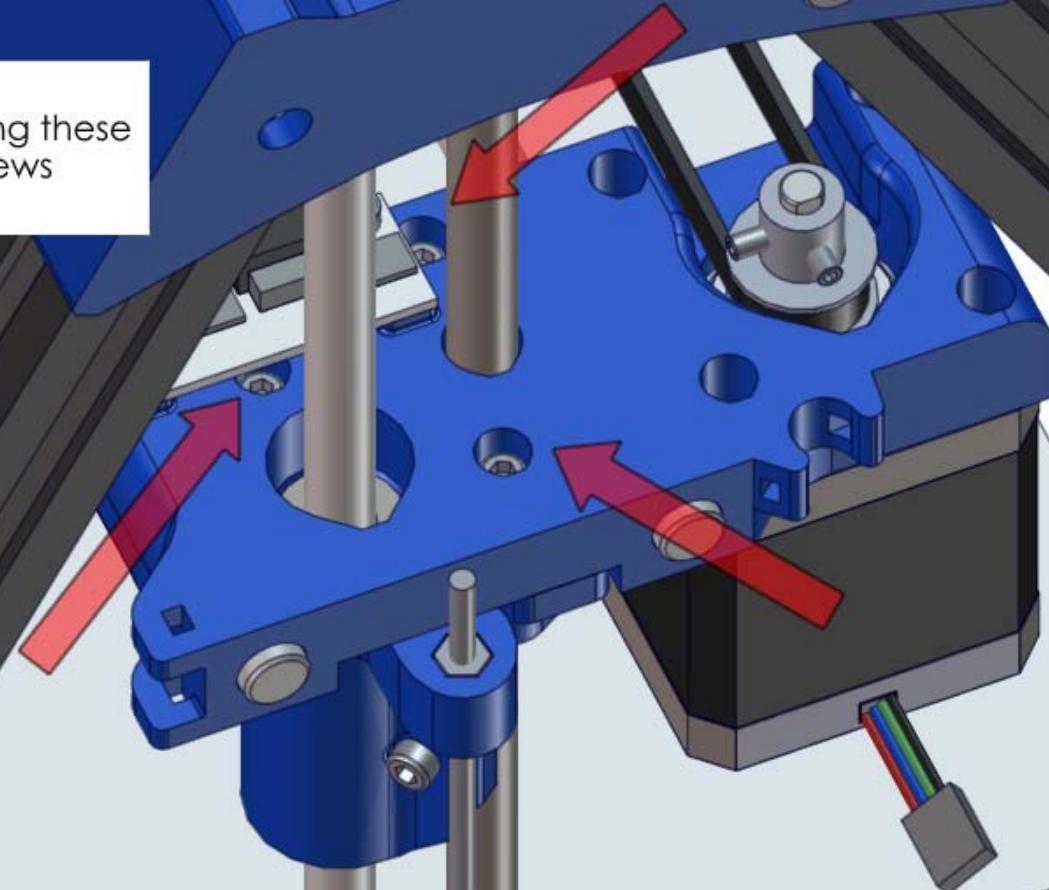


Tightening these
three crews



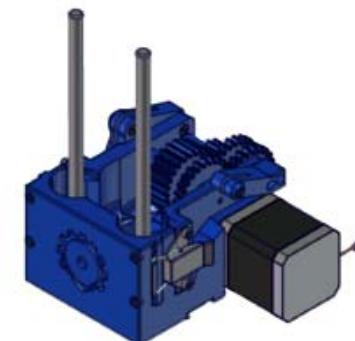
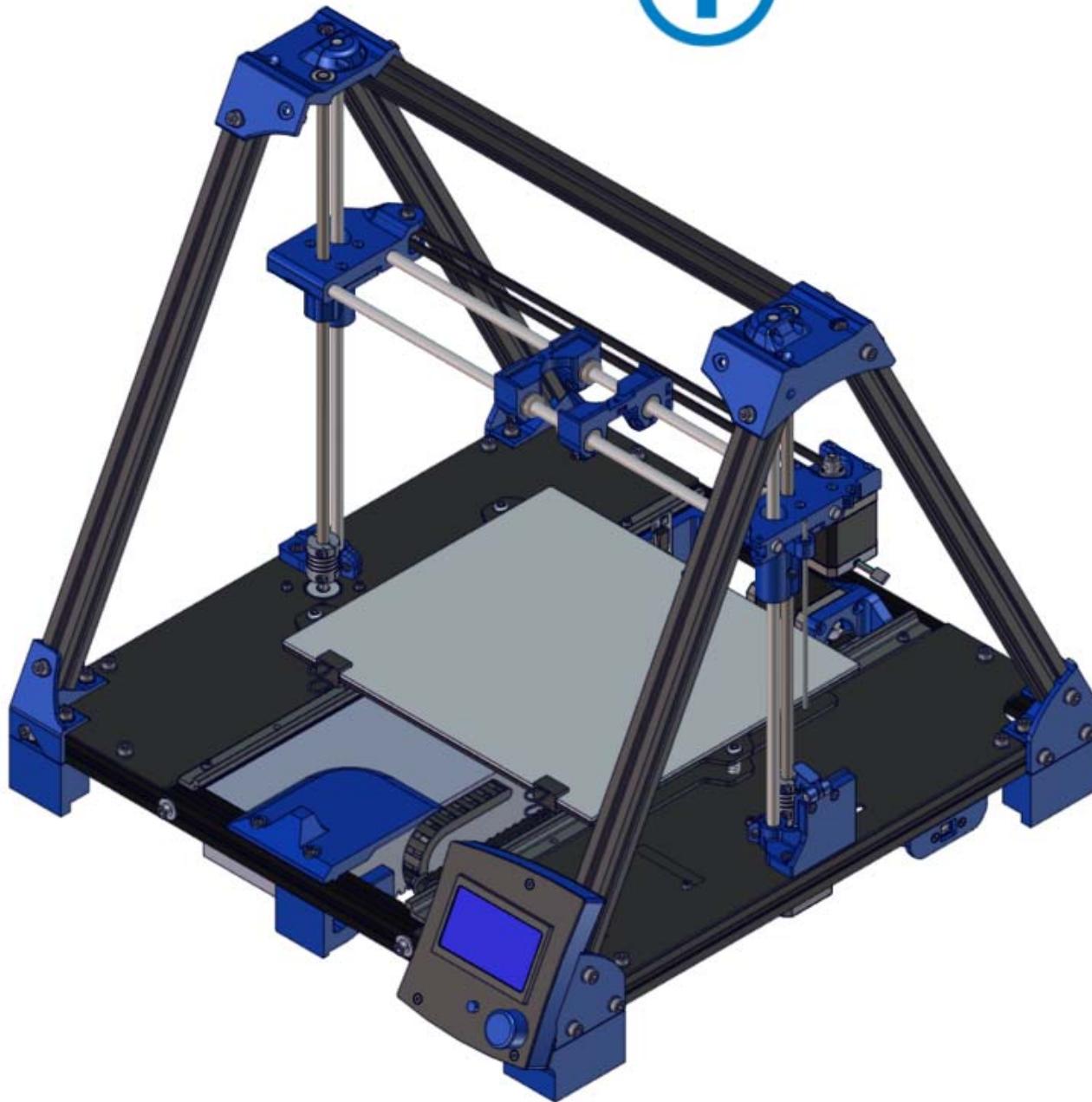


Tightening these
three crews





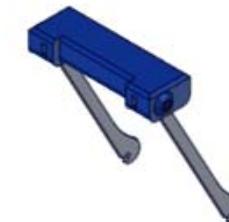
From this point we will proceed to the assembly of the modules: extruder body, plunguer, braces and syringe.



Extruder body



Plunger

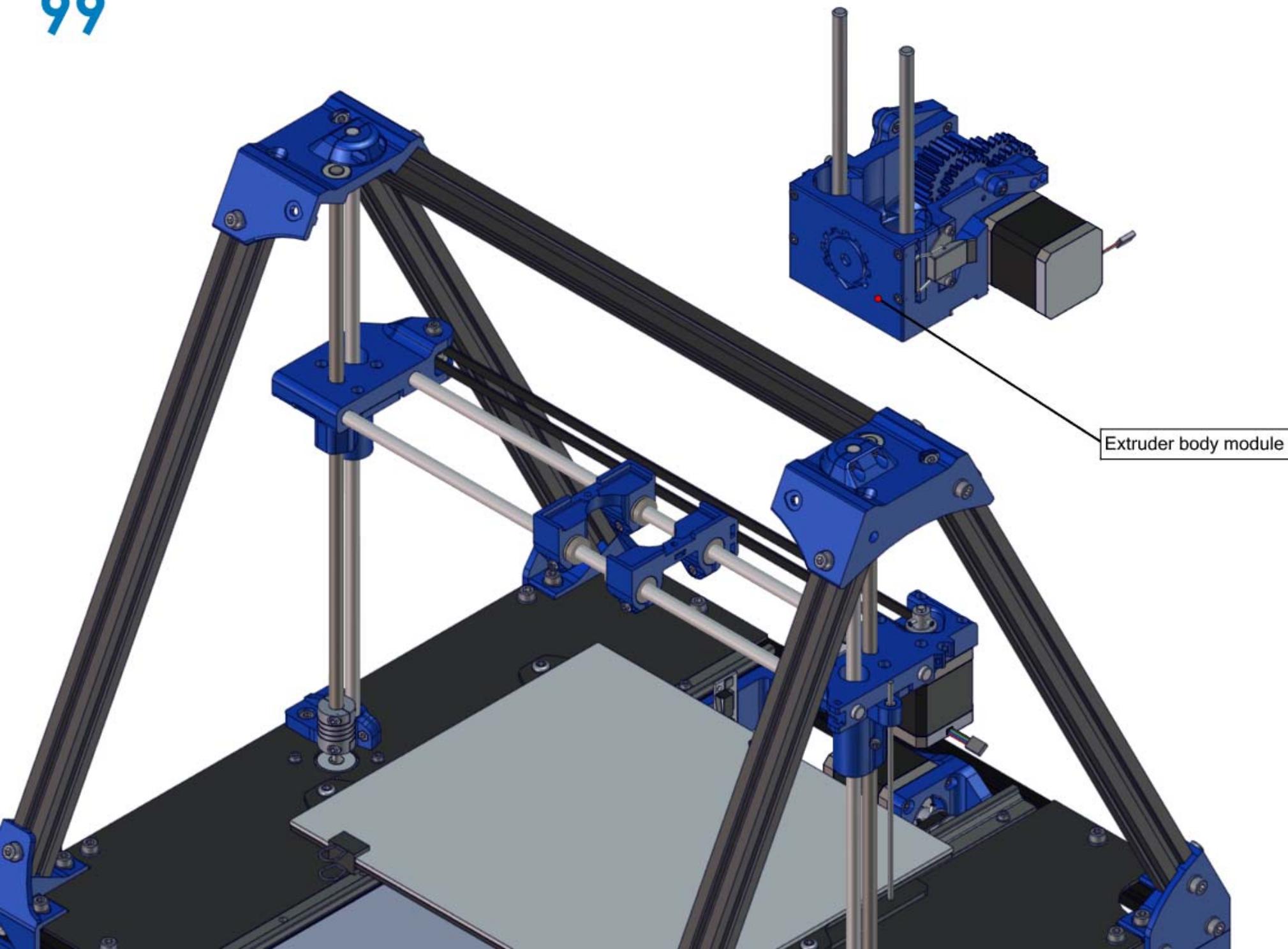


Braces

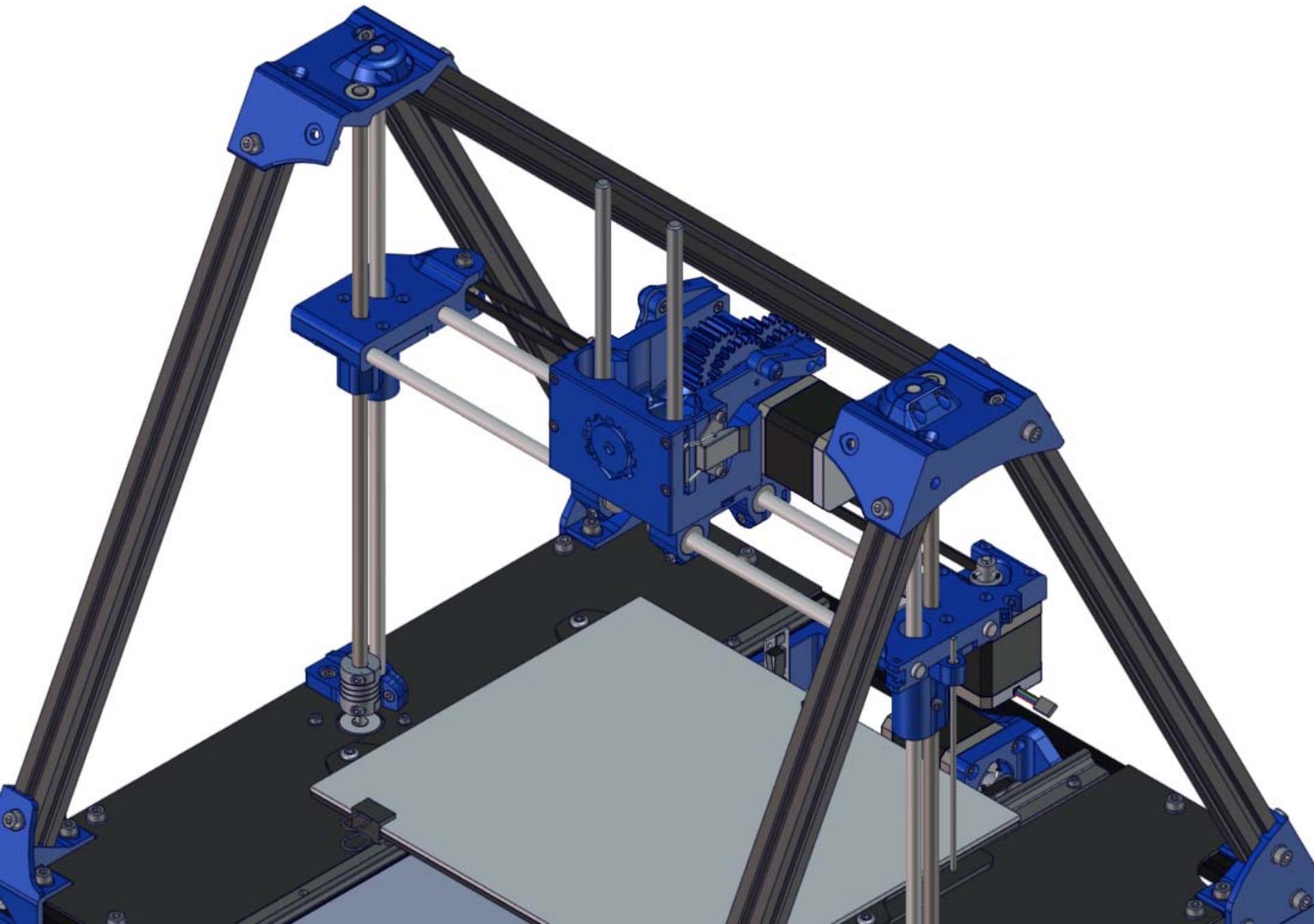


Syringe

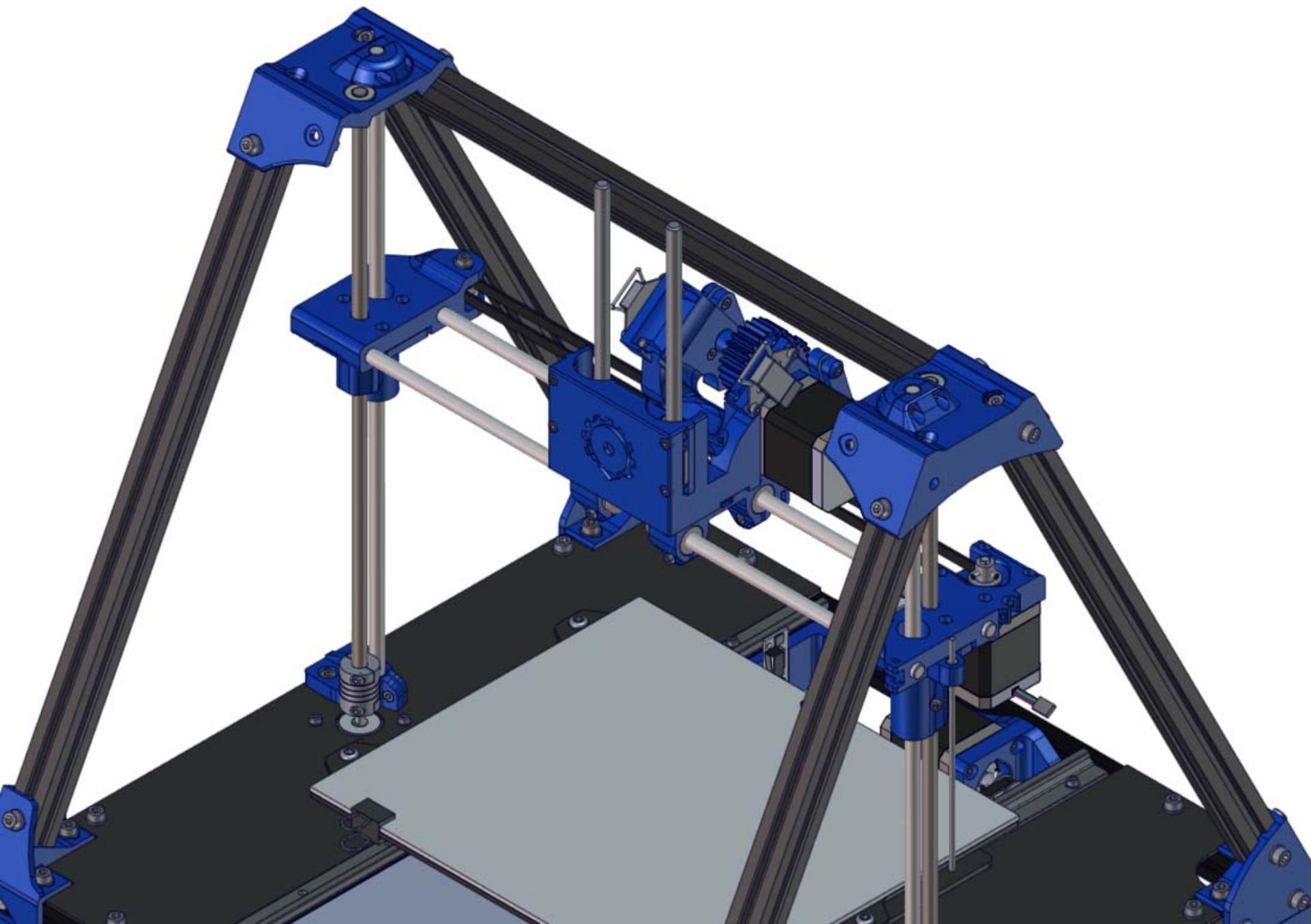
Main View



100



101

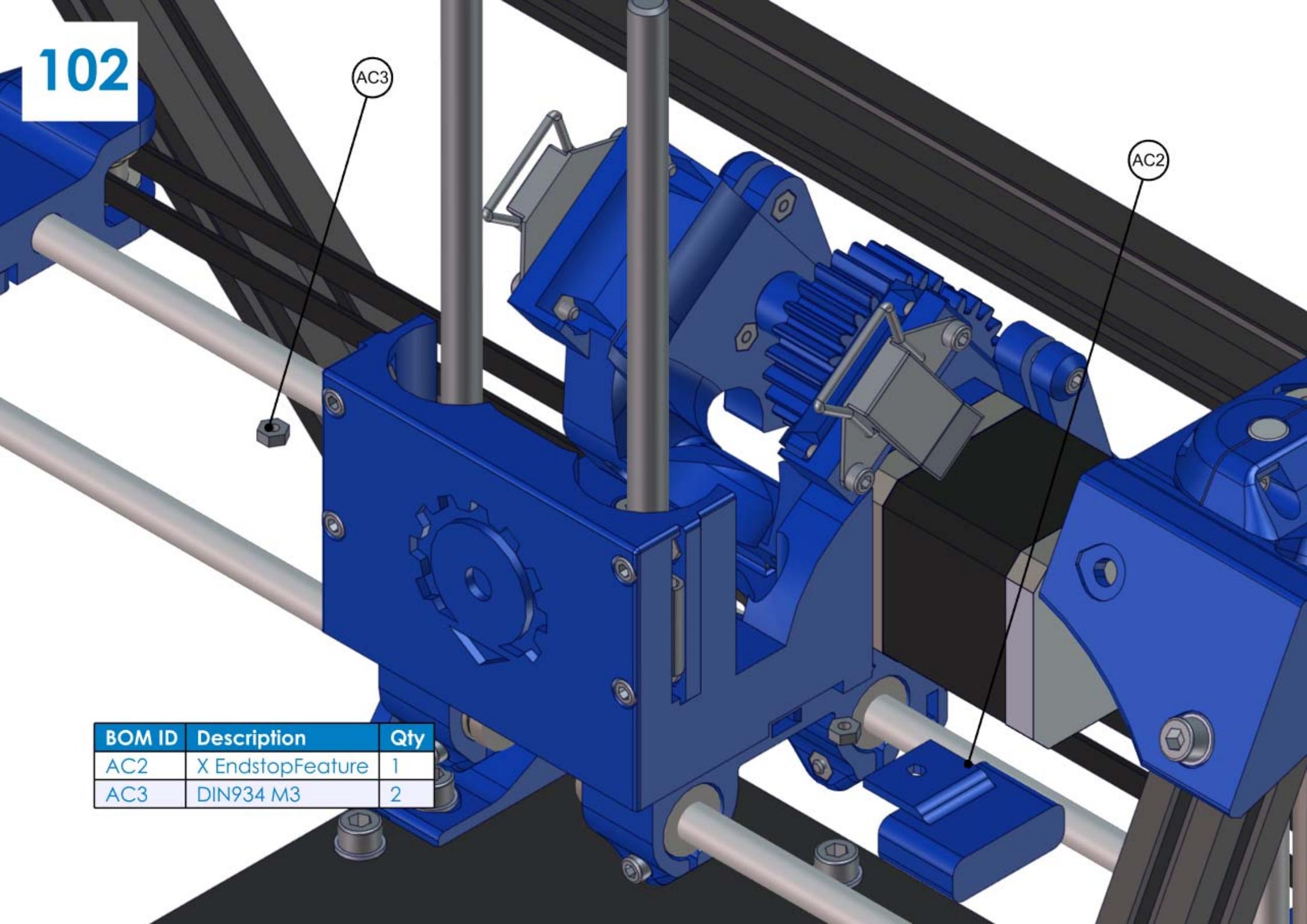


102

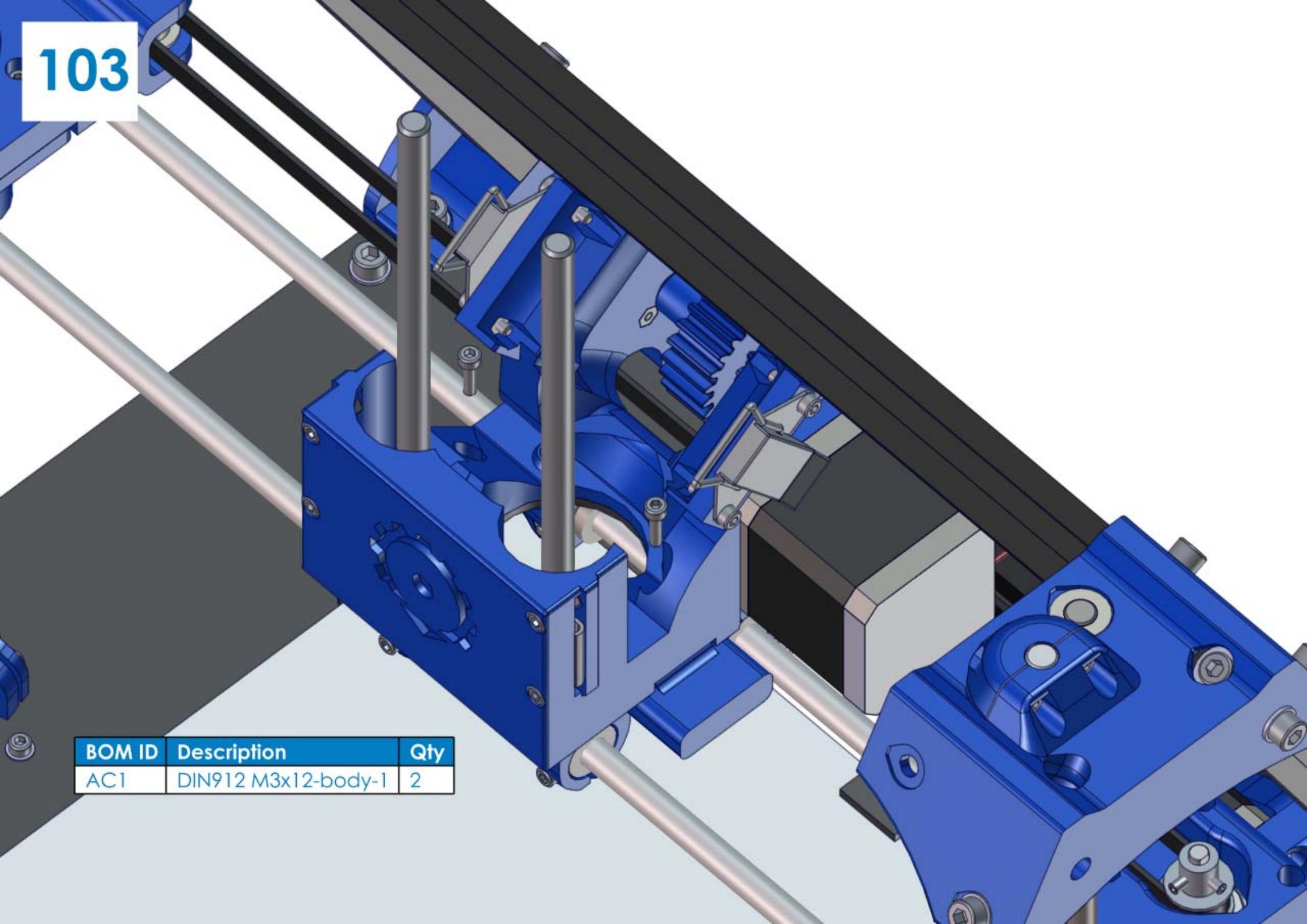
AC3

AC2

BOM ID	Description	Qty
AC2	X EndstopFeature	1
AC3	DIN934 M3	2

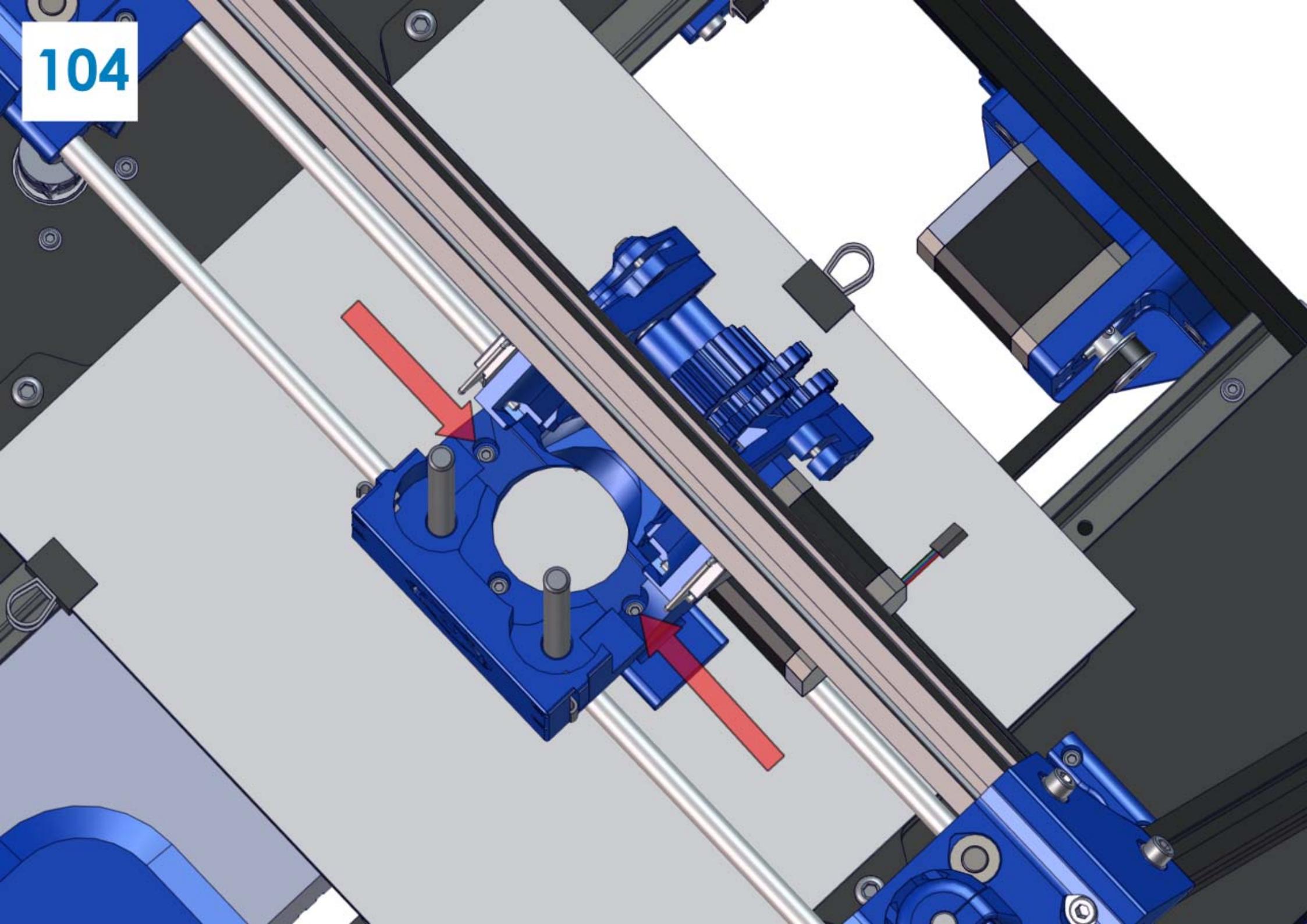


103

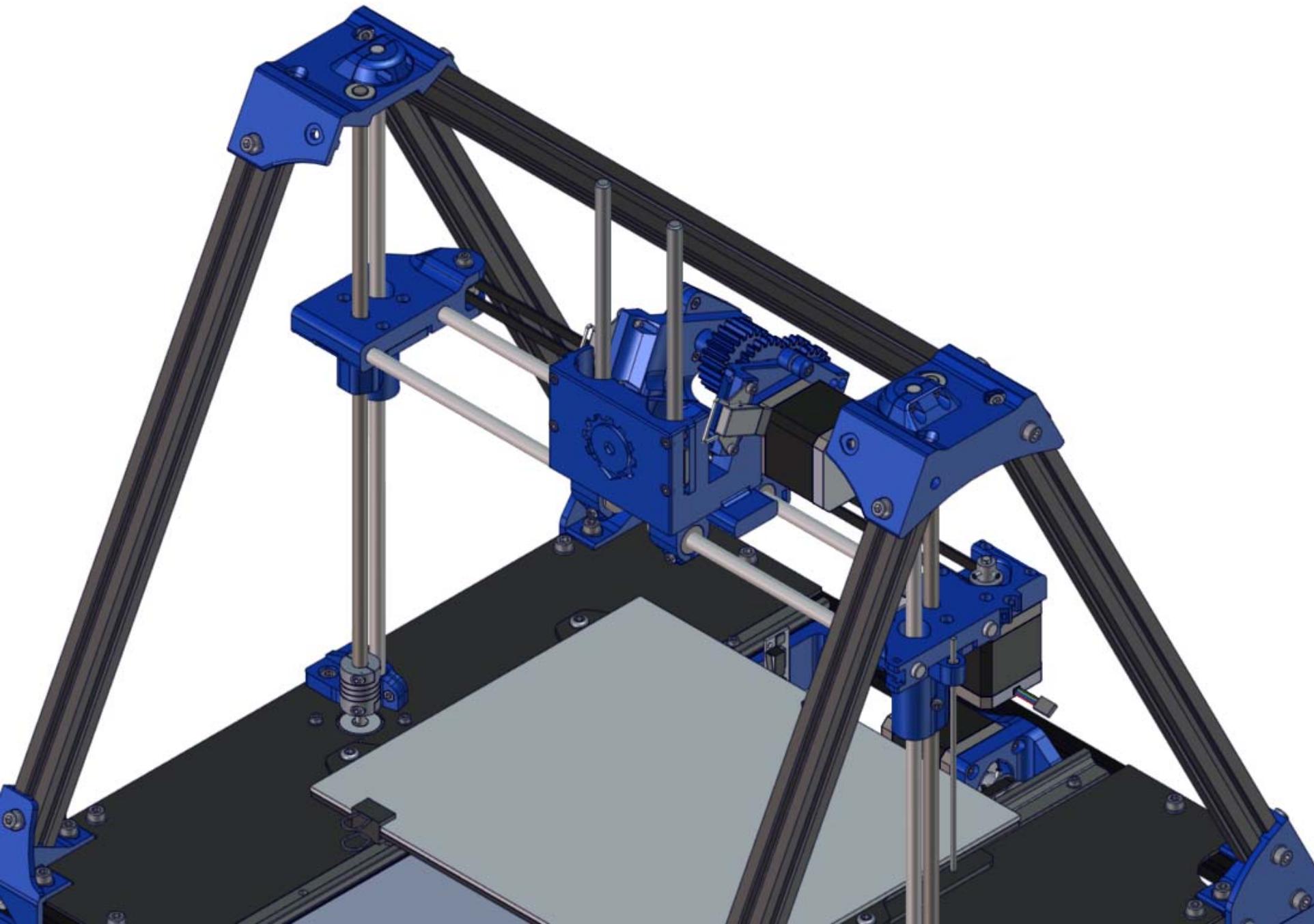


BOM ID	Description	Qty
AC1	DIN912 M3x12-body-1	2

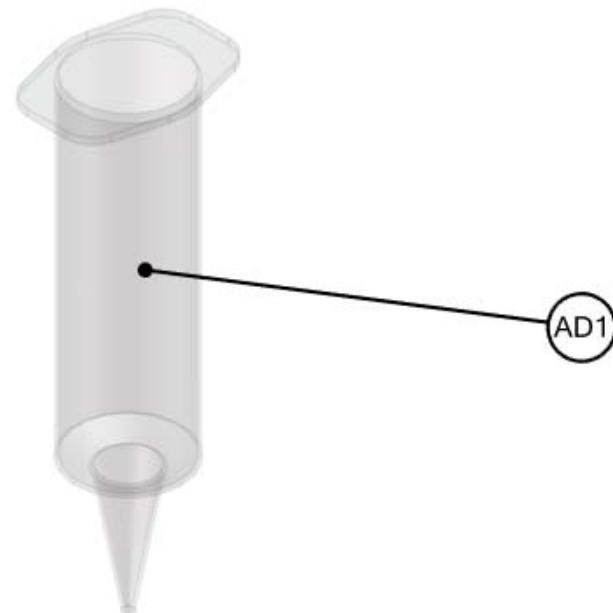
104



105



106

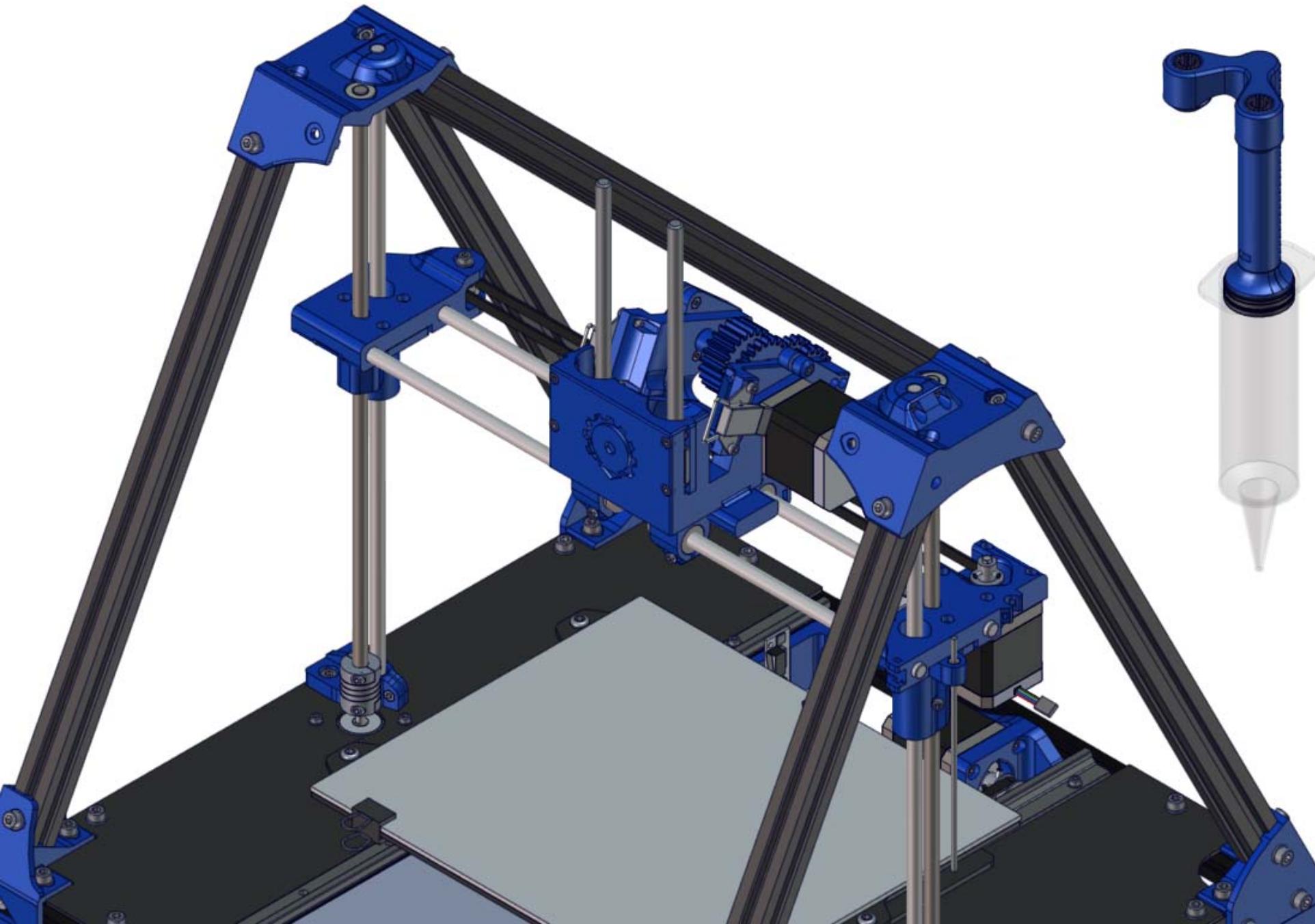


BOM ID	Description	Qty
AD1	Jeringa	1

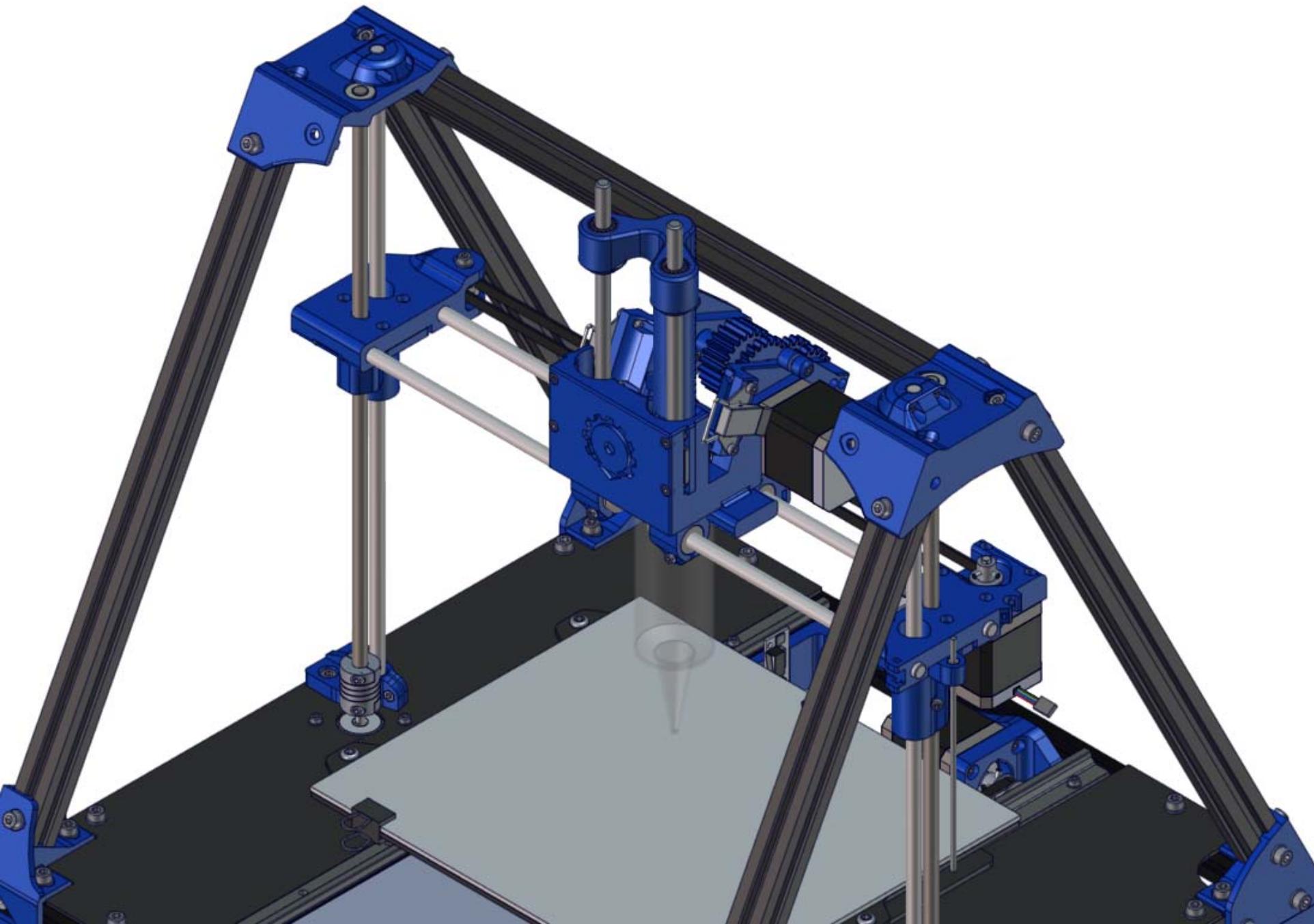
107



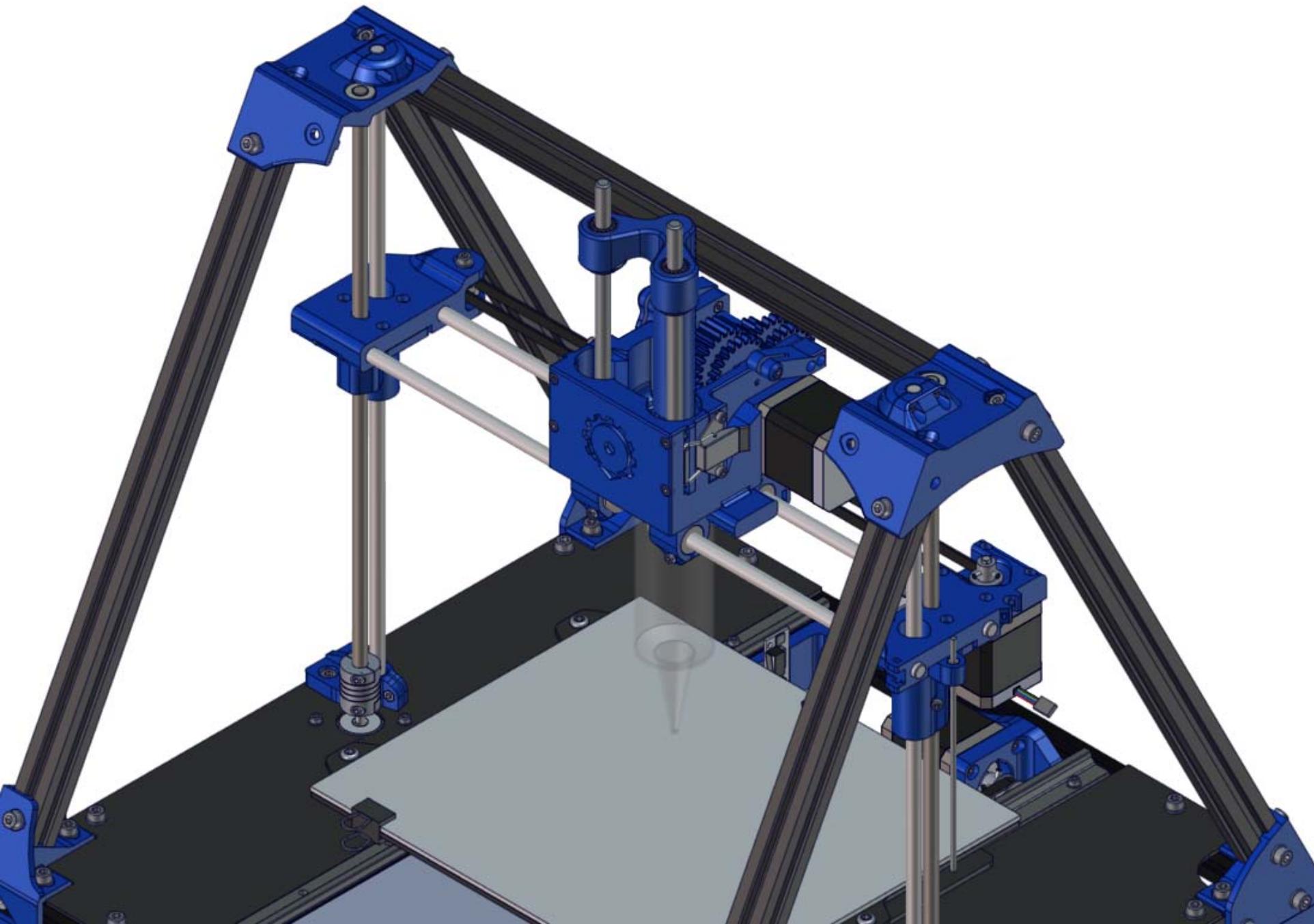
108



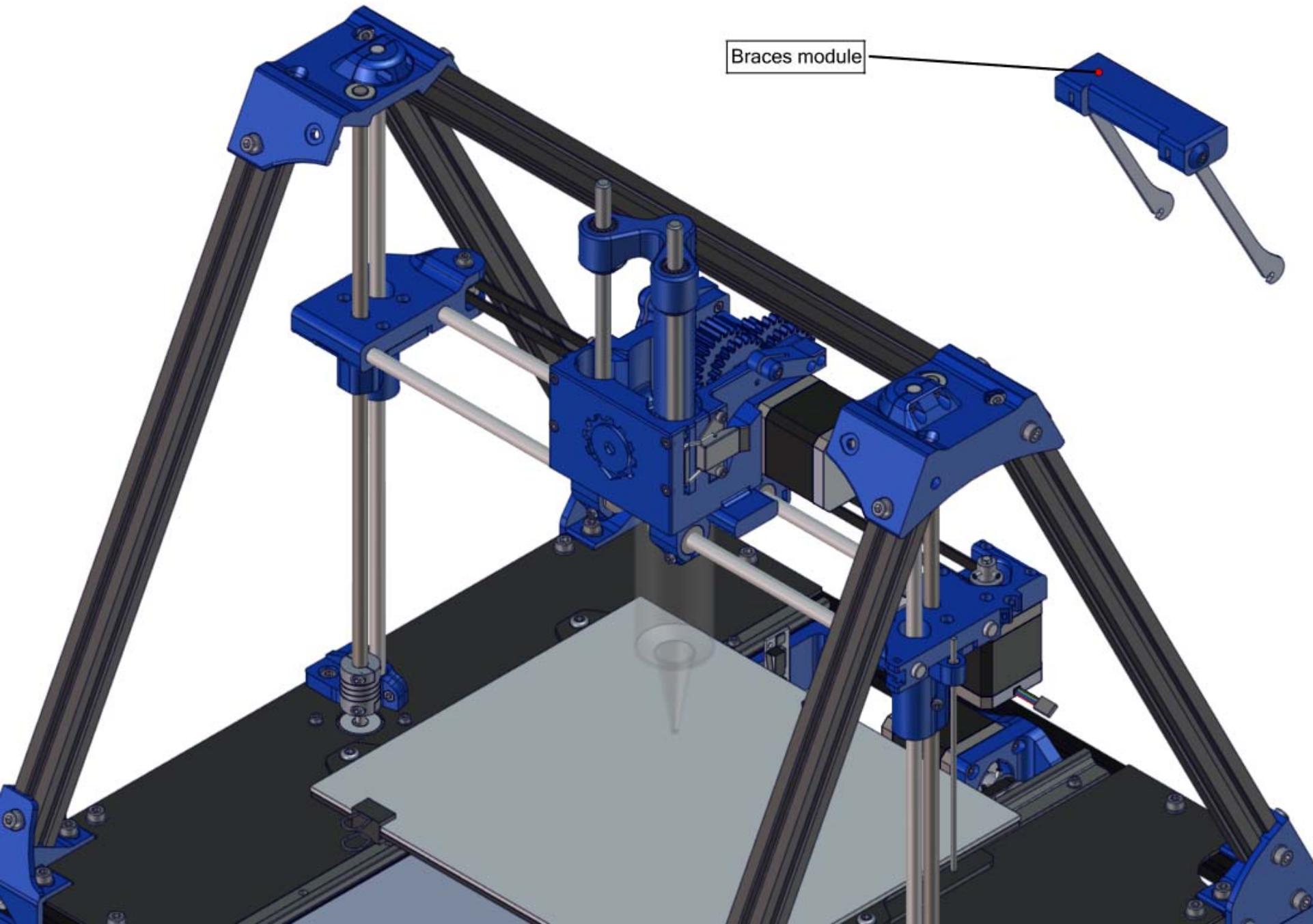
109



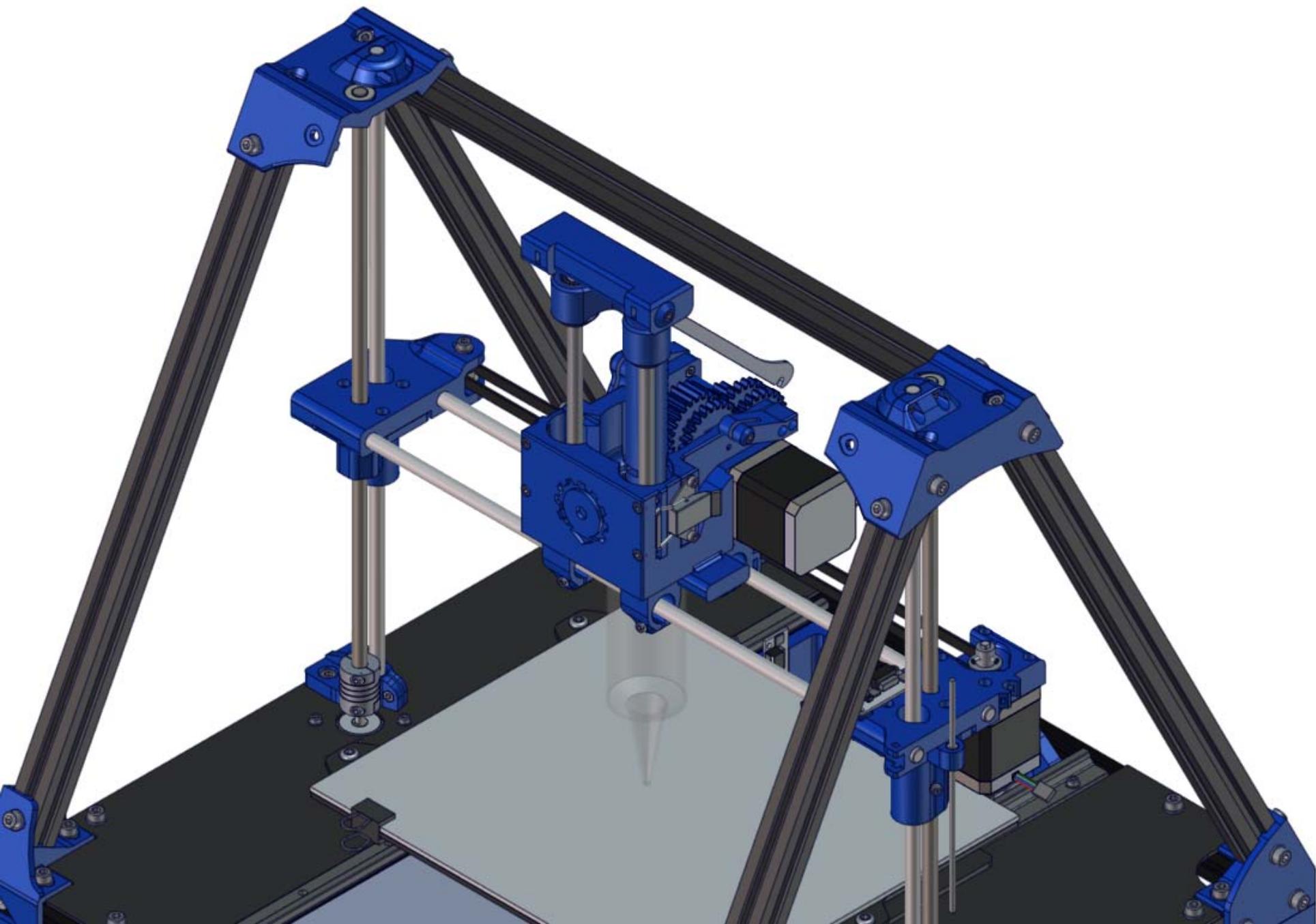
110



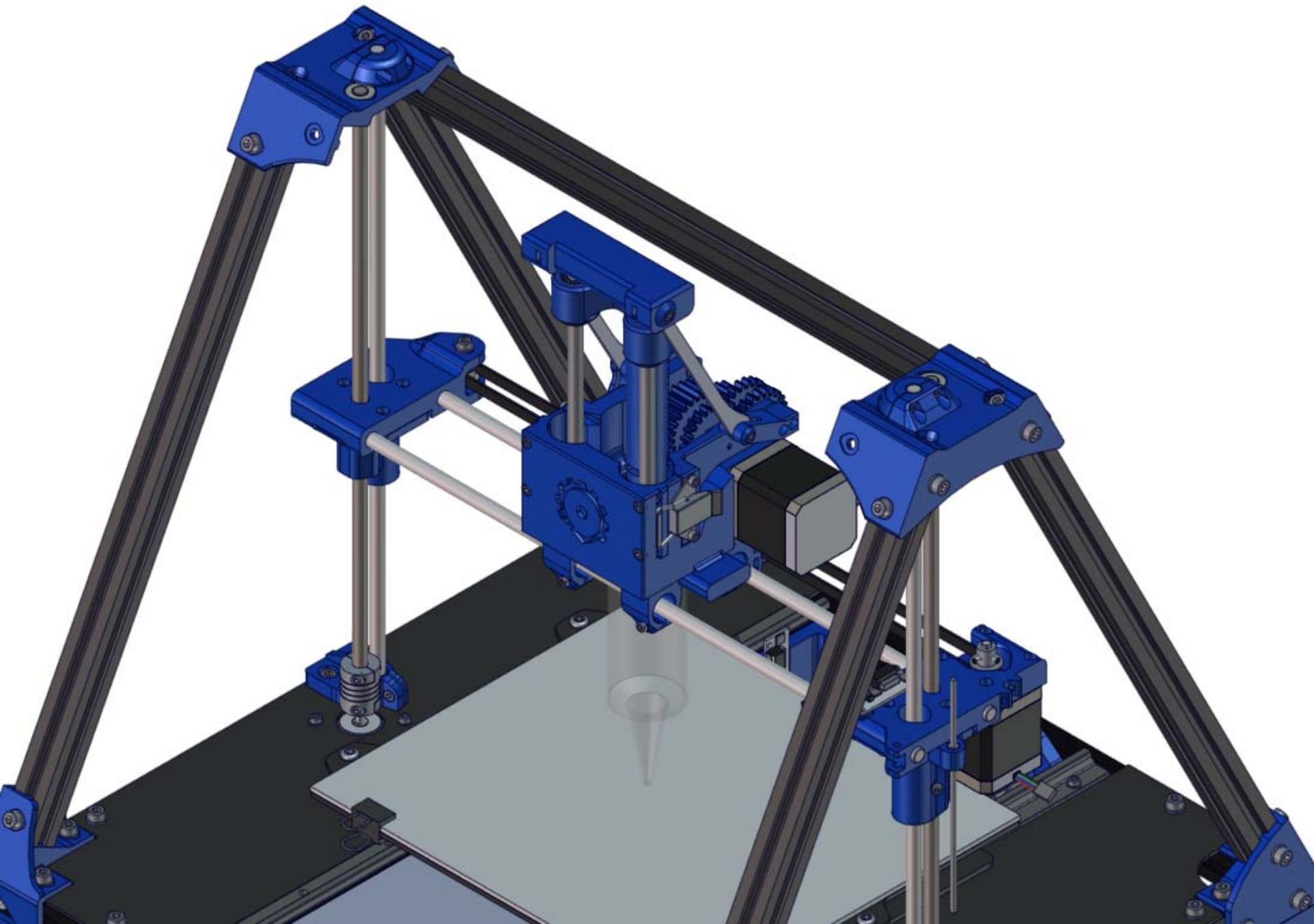
111



112

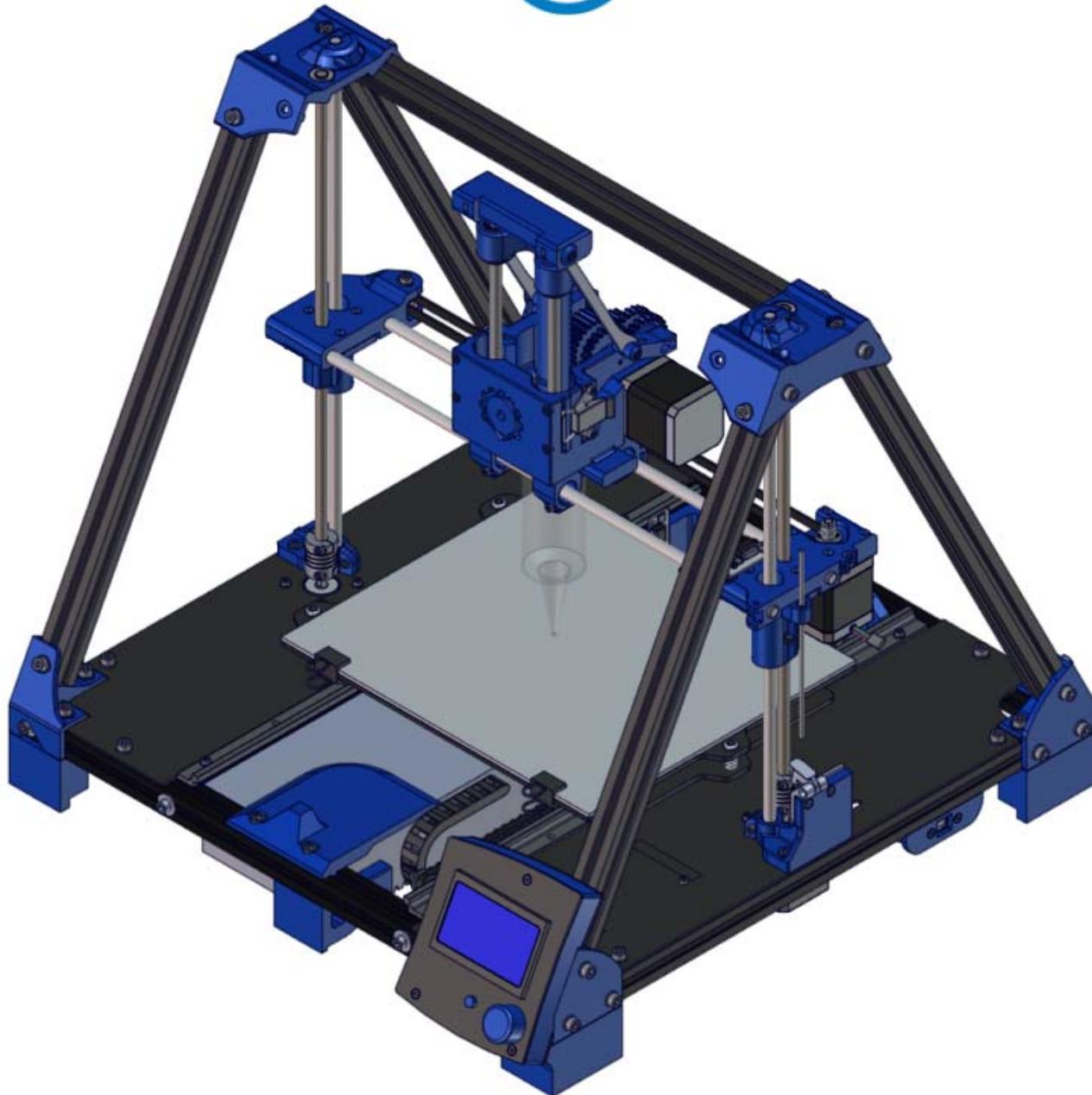


113

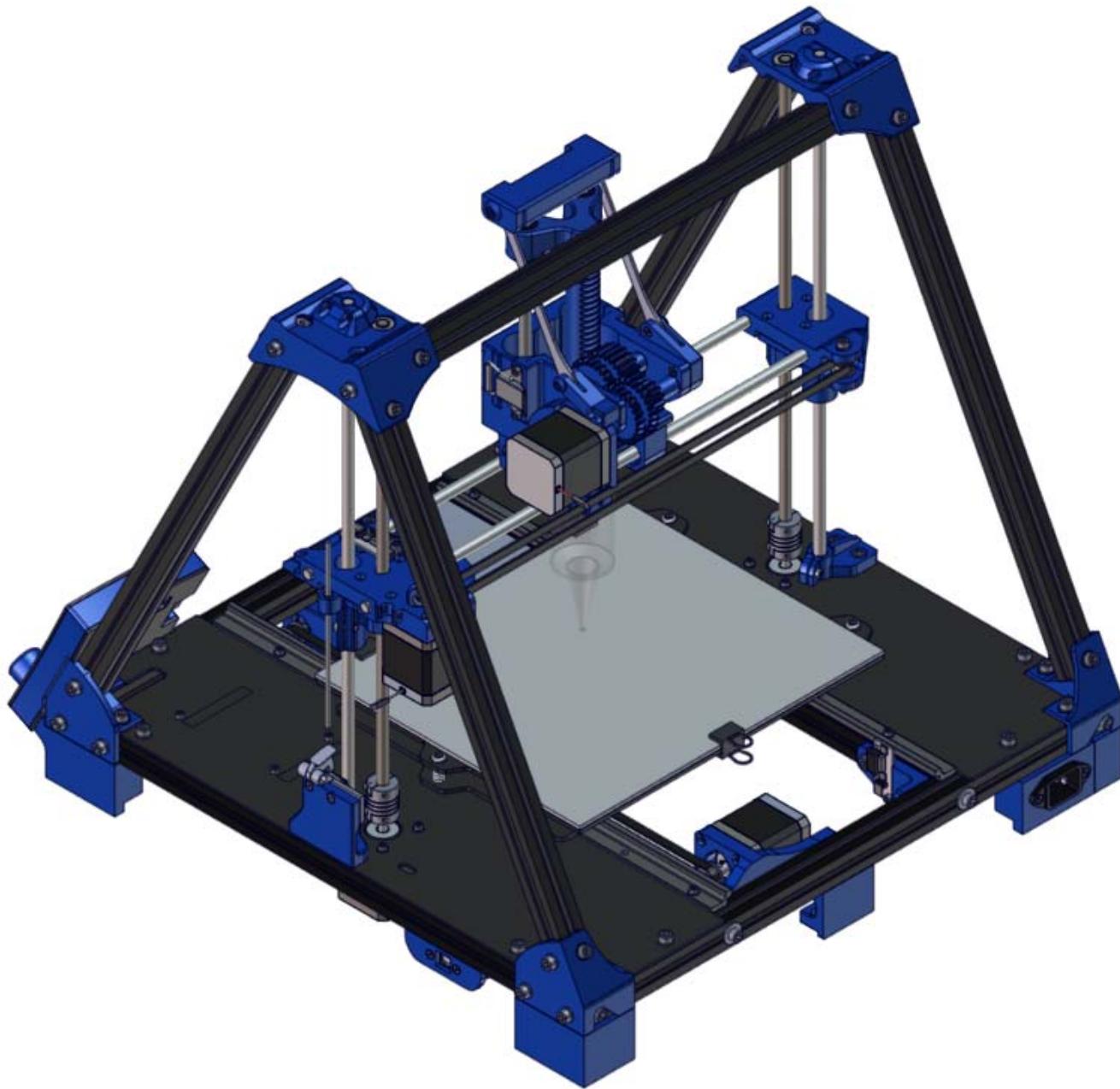




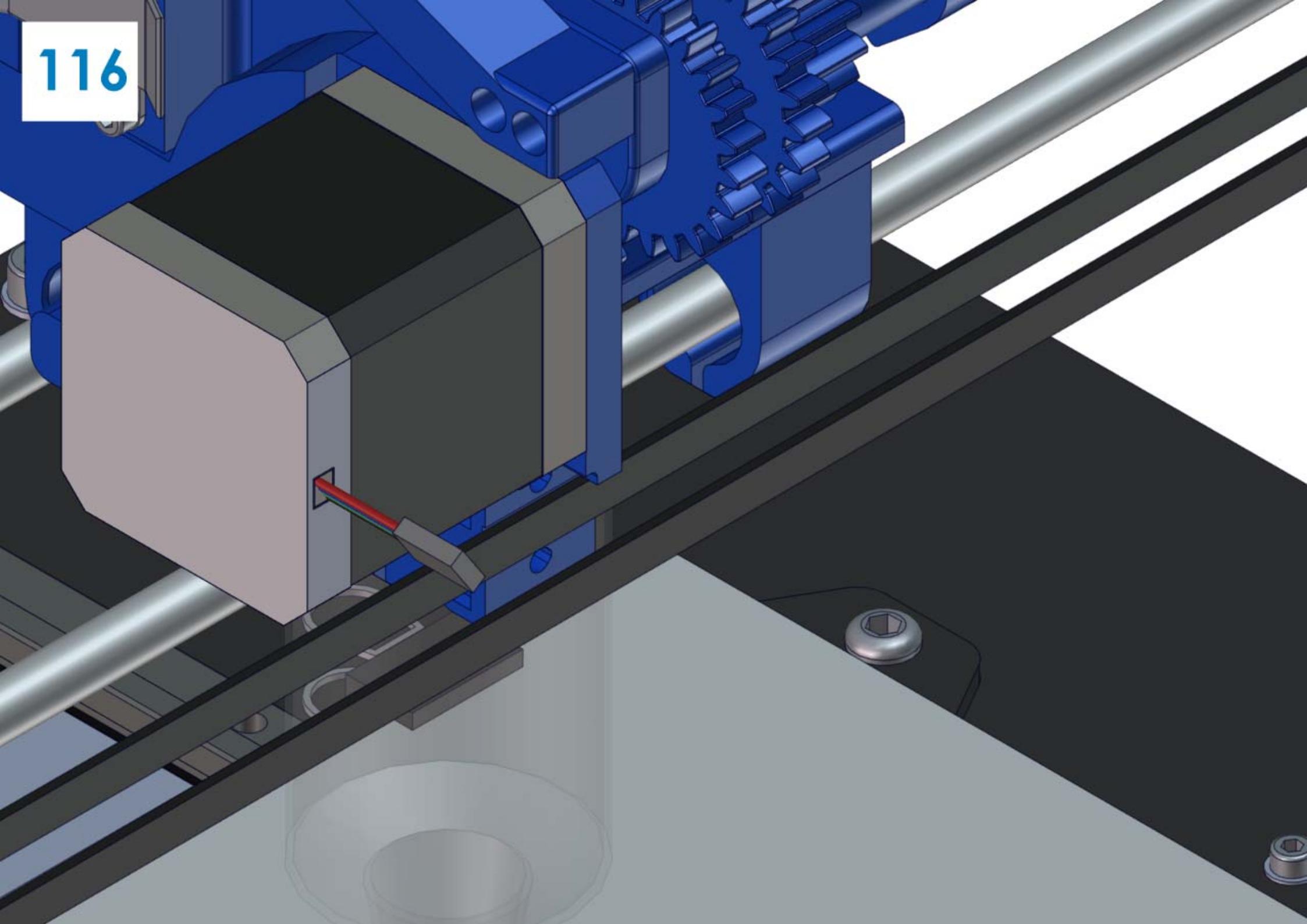
To change the extruding paste from interior of the syringe, should proceed to disassembling modules in the reverse order.



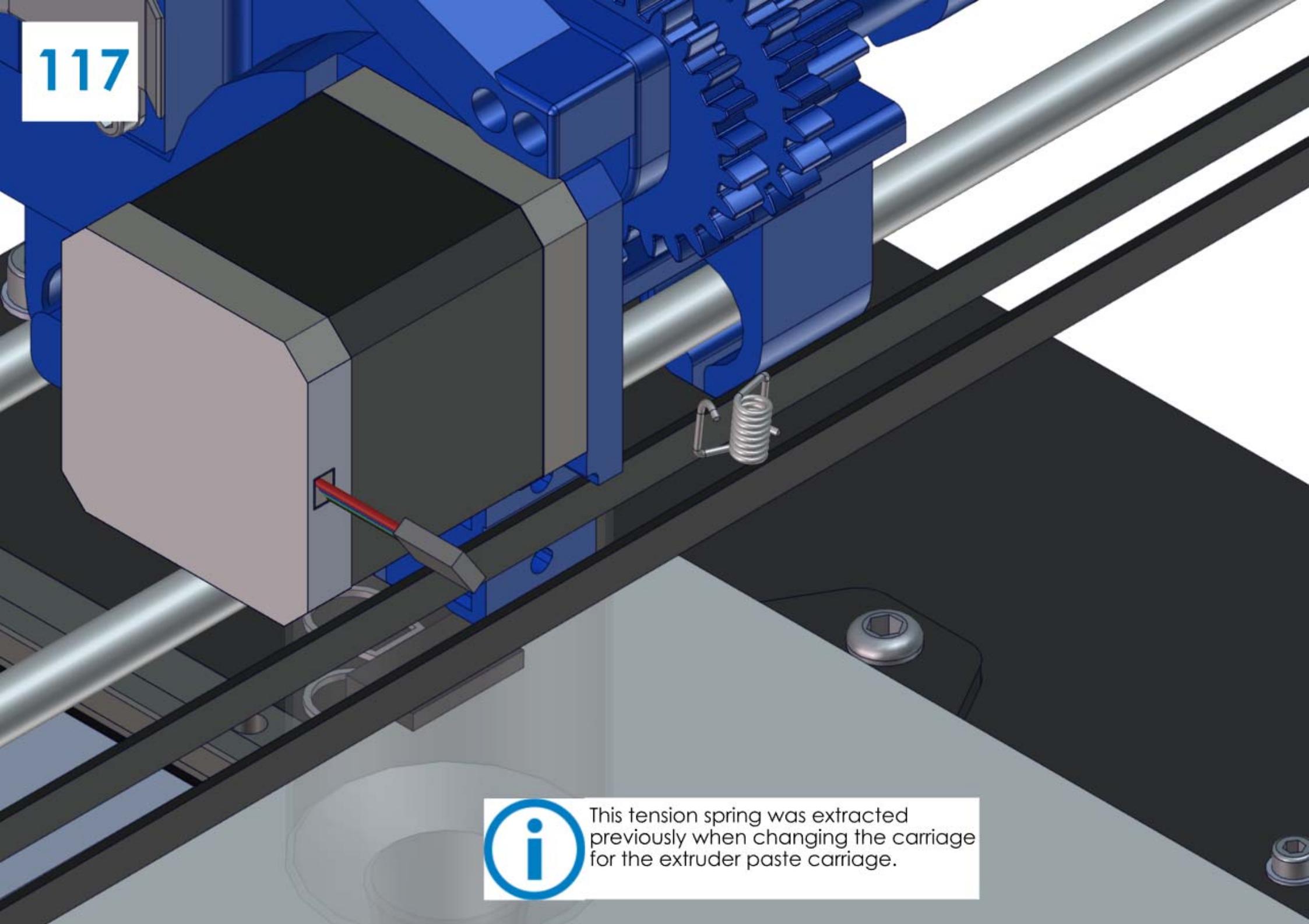
115



116

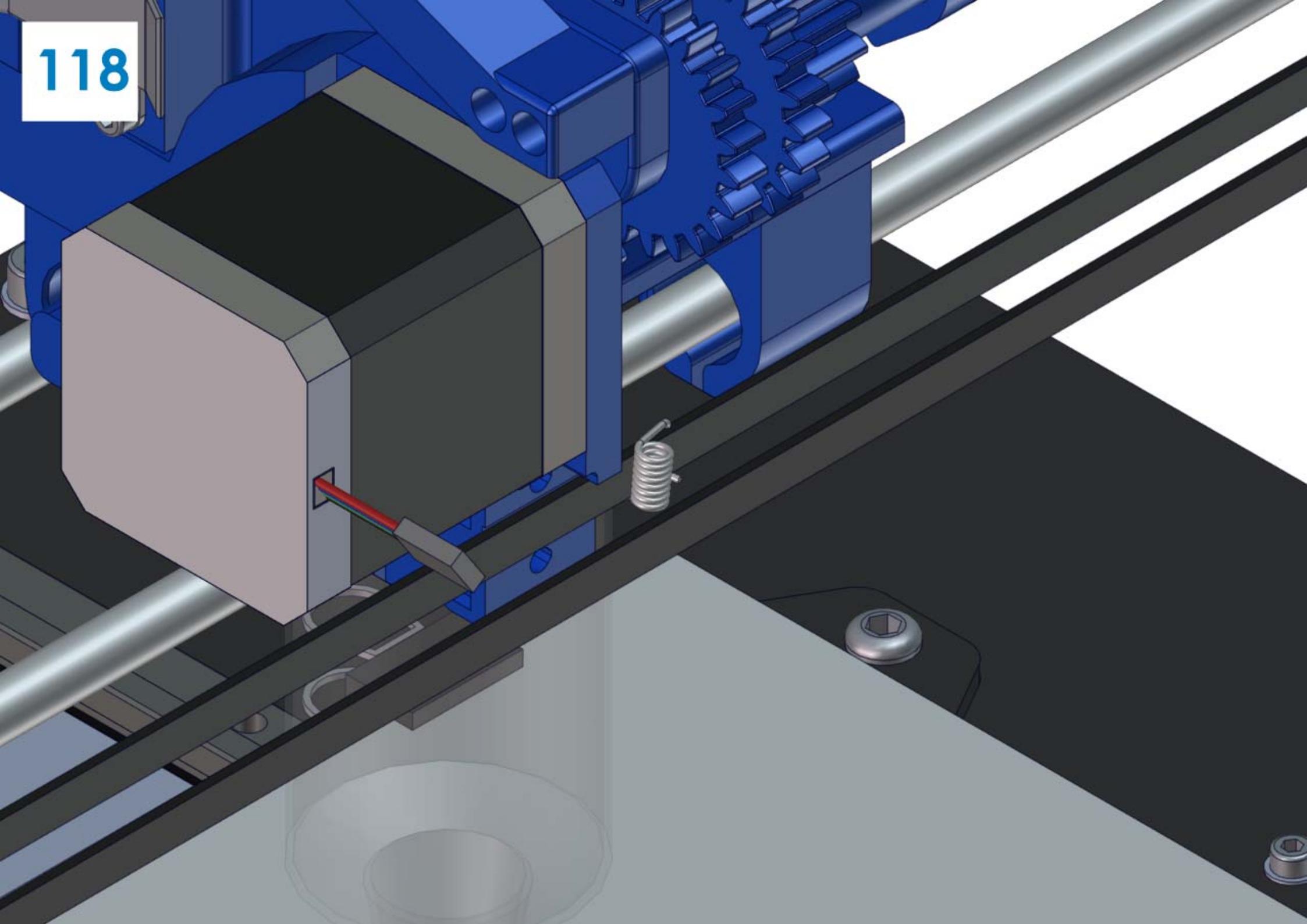


117

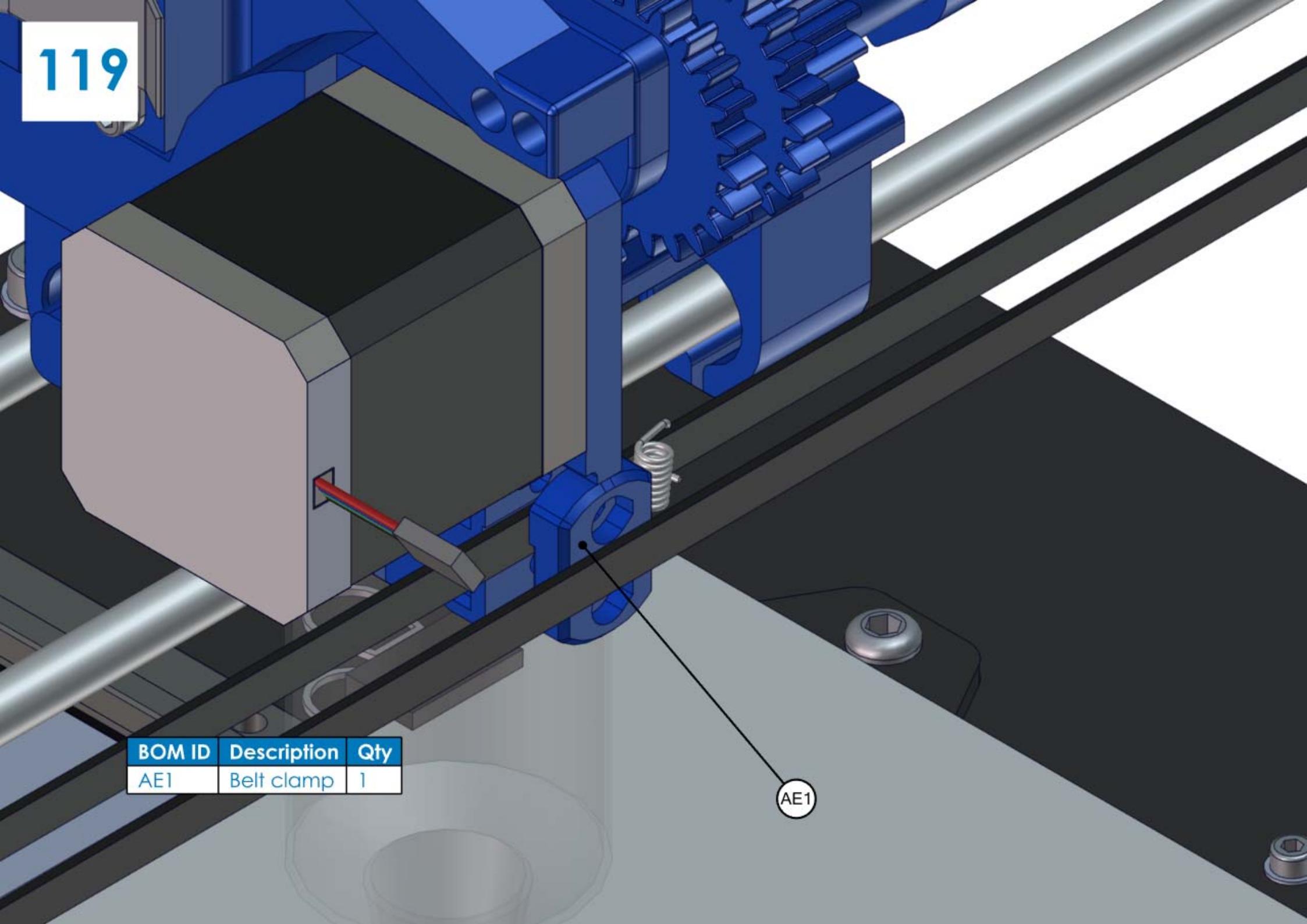


This tension spring was extracted previously when changing the carriage for the extruder paste carriage.

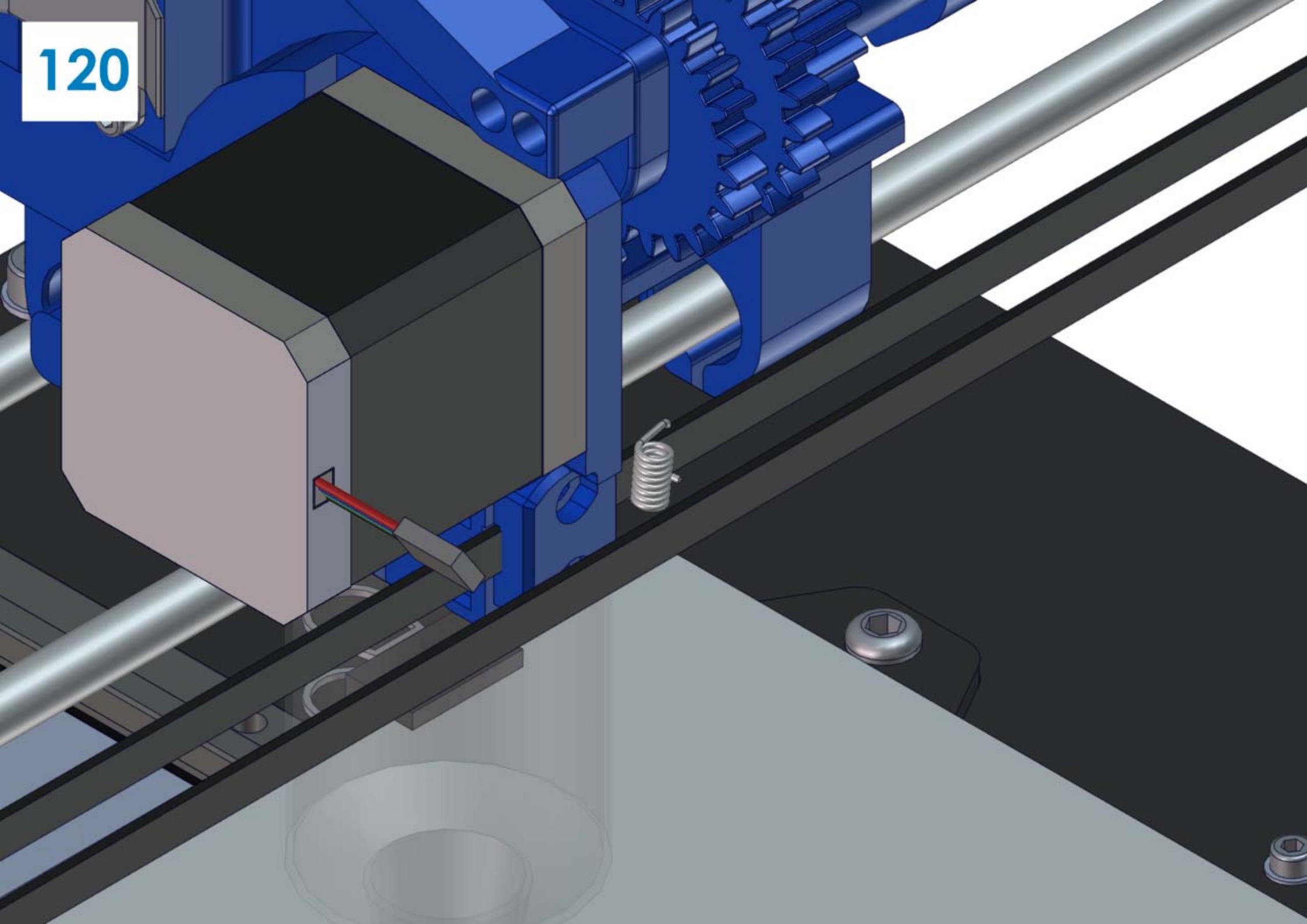
118



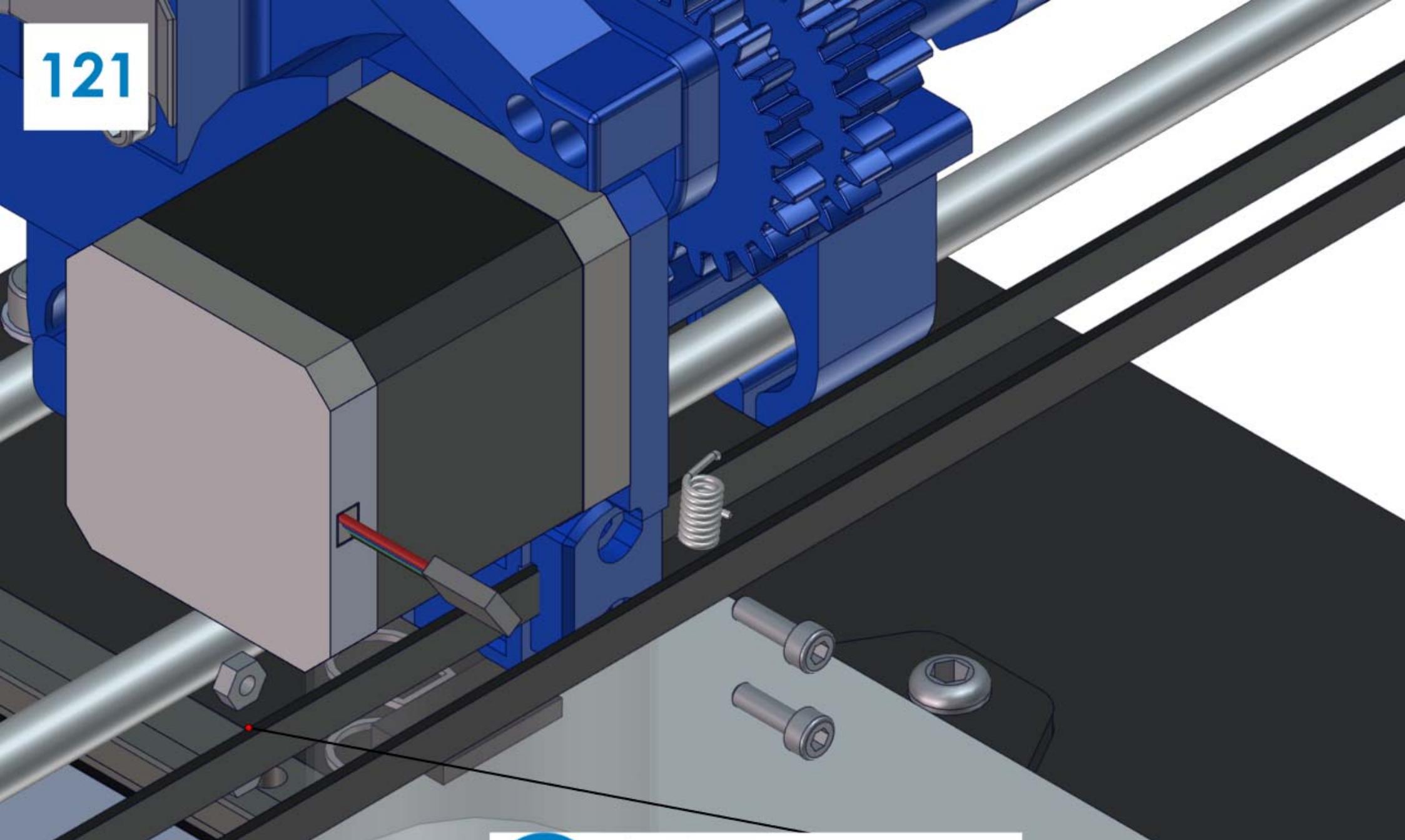
119



120

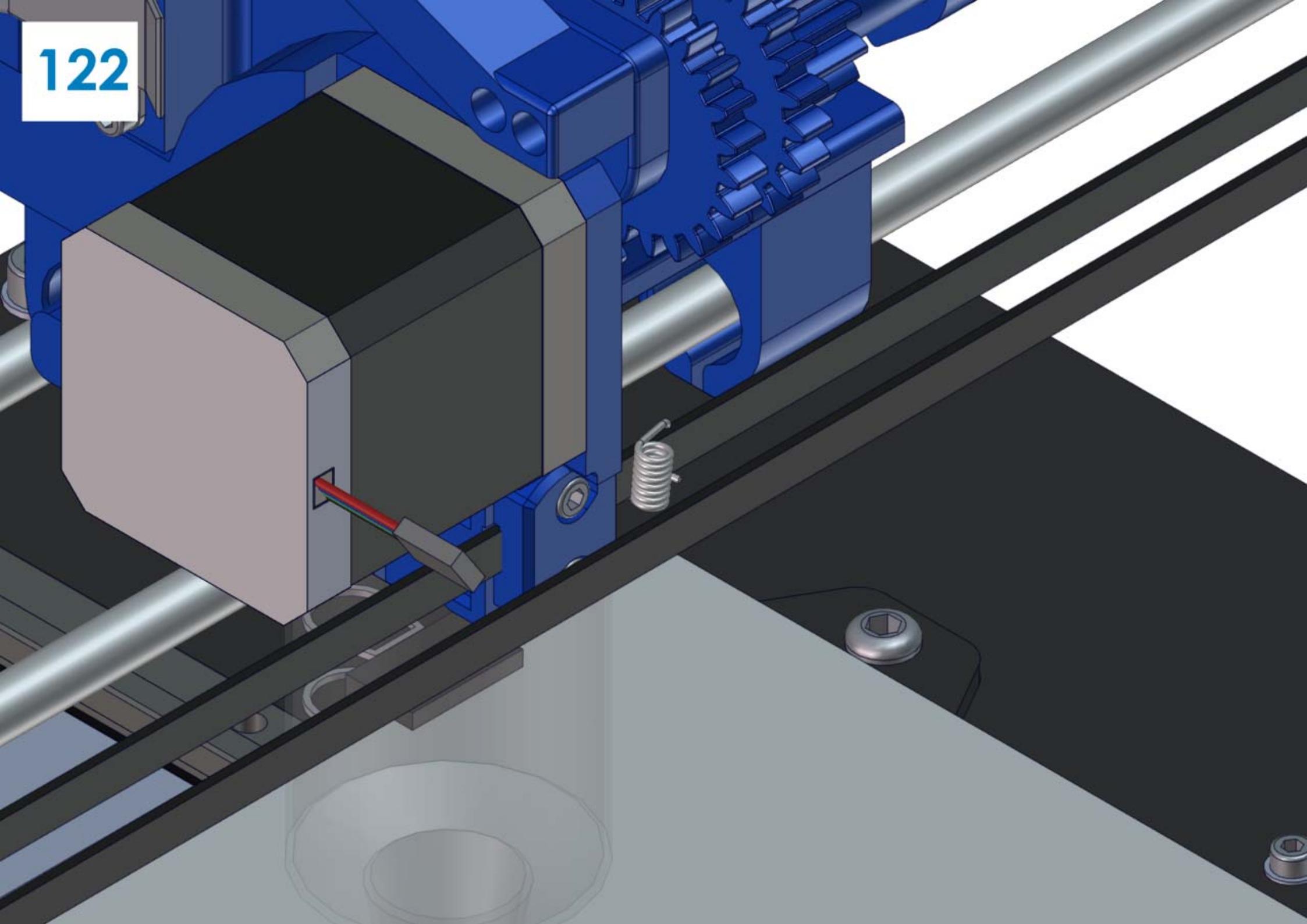


121

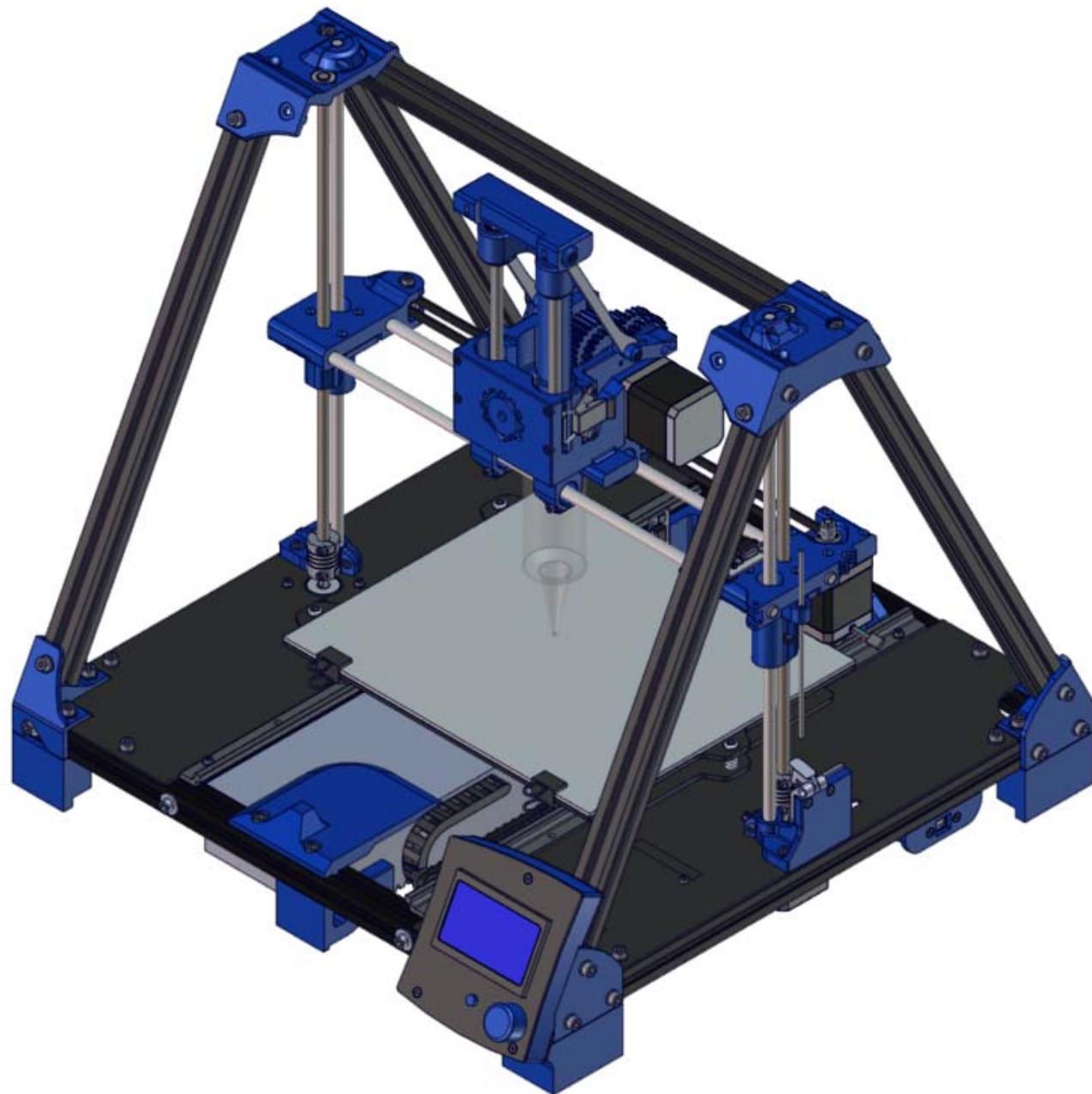


This tension screws were extracted previously when changing the carriage for the extruder paste carriage.

122



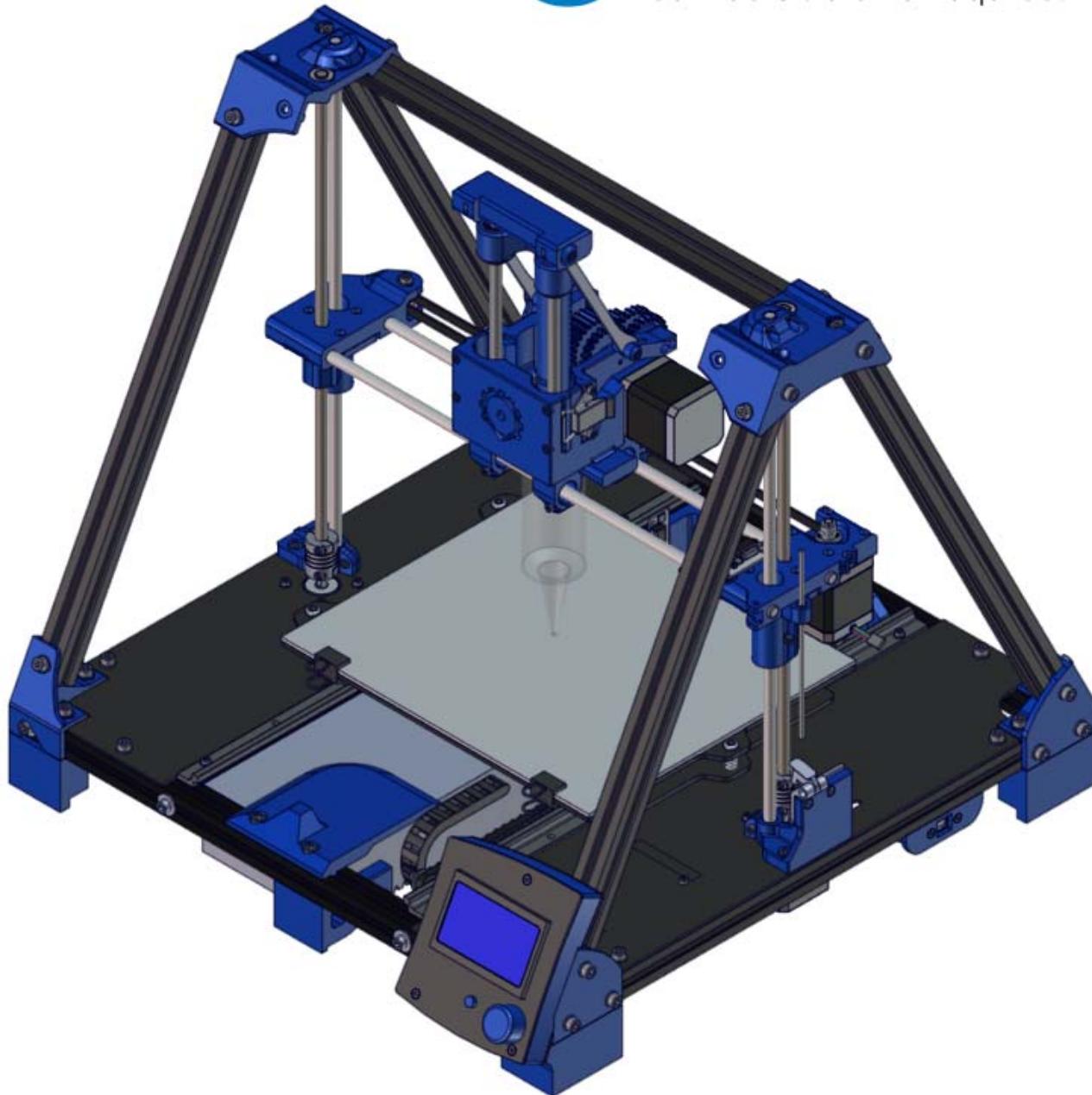
123



124



Once assembly is complete Paste extruder, should proceed to connect the motor connector, the remaining connectors are not required.





This section describes the steps to modify the firmware of the printer for the Pastel extruder upgrade.

The first step is to download the Arduino IDE on a computer. This is the program that will allow us to interact with the Arduino card BCN3D+.

1. Download the software Arduino from our web www.reprapbcn.com download section (is mandatory to download our version of arduino) and download the Pastel extruder firmware.
2. Once downloaded, connect the BCN3D + to computer via usb cable. So the connection is established with the Arduino.

The first time a board is connected to a computer is needed to install the drivers. If your computer does not install the drivers automatically when you connect the plate, followed the steps in:
<http://arduino.cc/en/guide/windows#toc3>

3. Open the Arduino application
4. From the menu File> Open, select Paste extruder firmware version downloaded above.

The file to be opened is the one with the extension * .ino, and is in a folder with the same name, mixed with all firmware files.

5. Select the model of Arduino board from Tools> Card> Arduino Mega 2560 & Tools> Serial Port> COM X
 - The card that operates the BCN3D + is an Arduino Mega 2560.
 - Refers to the port where we connector plate connected to the computer (COM port). We can check in the (Windows) operating system from Start> Computer> Right click> Properties> Device Manager> Ports COM and LPT.