

Part 1: Frame Assembly

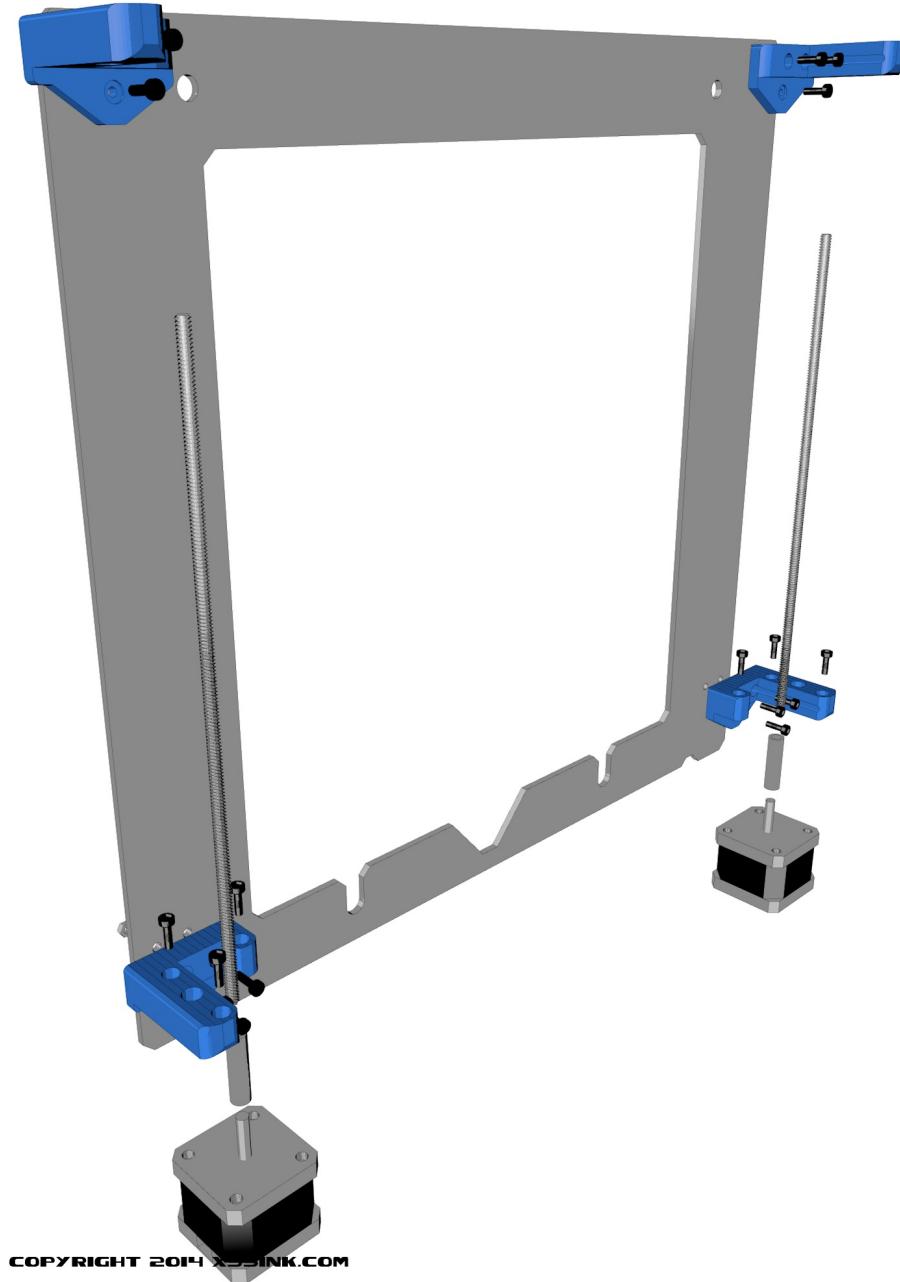


Fig 1.1 (Frame front)

Parts:

- 18) M3X10 Bolt
- 12) M3 Nut
- 2) Vinyl Z coupling
- 2) Low torque motor
- 2) Z-axis top (Printed)
- 2) Z-axis bottom (Printed)
- 2) M5X245 leadscrew

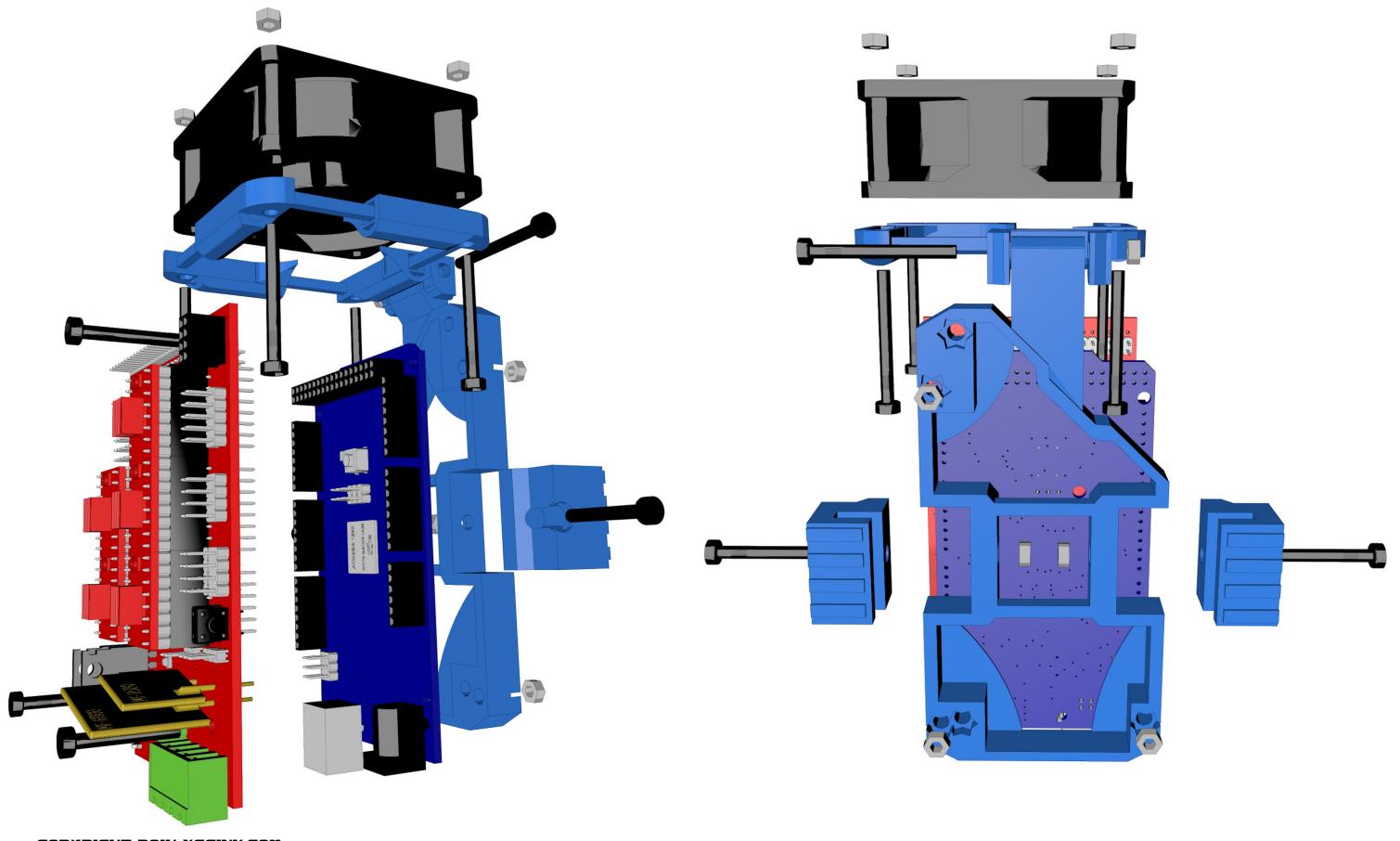
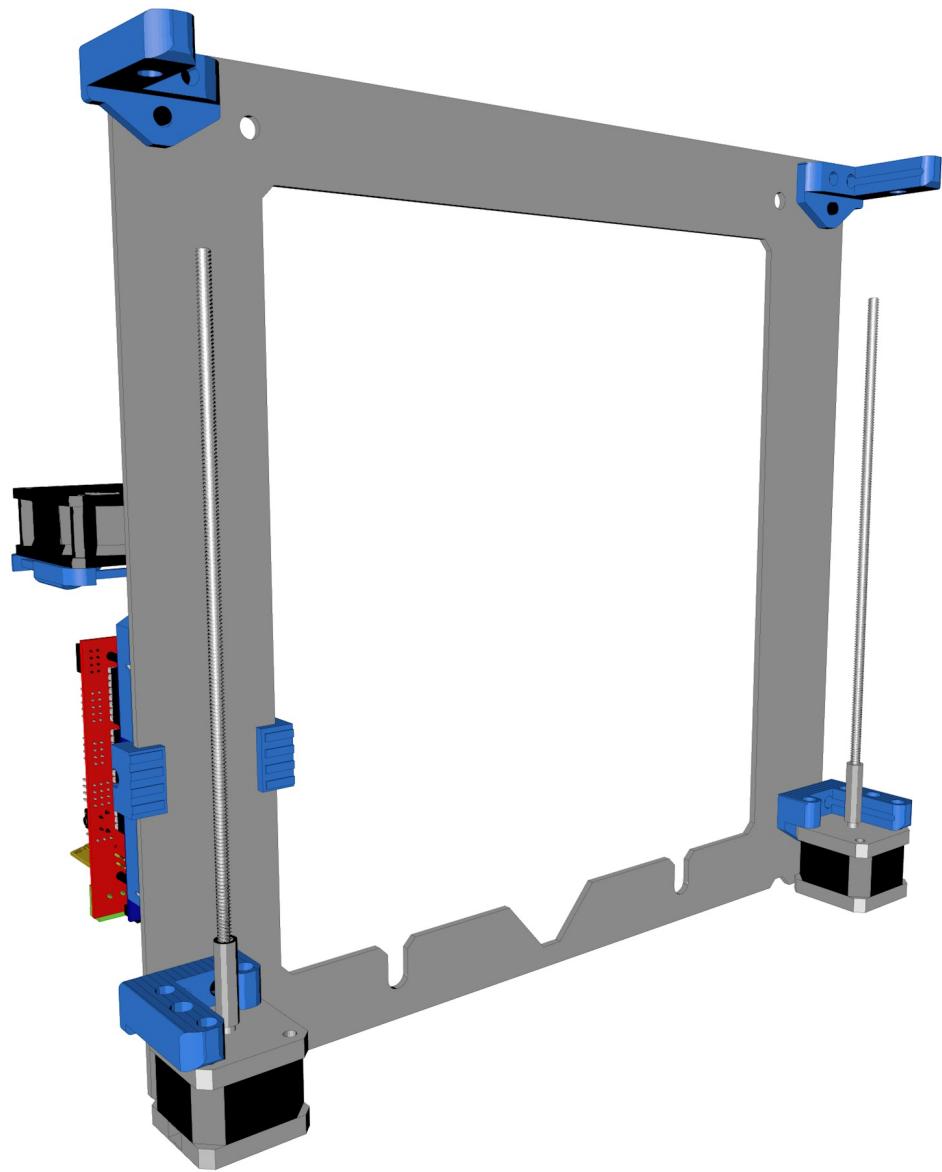


Fig 1.2-1.3 (MoBo Mount)

Parts:

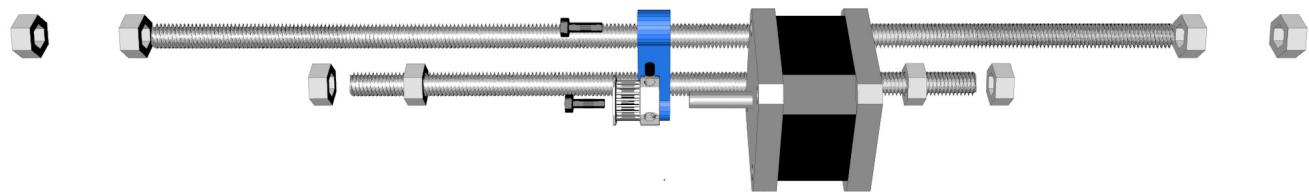
- 1) Electronics Mount (Printed)
- 1) Fan Mount (Printed)
- 2) Electronics Mount Clamp (Printed)
- 1) RAMPS
- 1) Arduino MEGA 2560
- 1) Fan
- 1) M3X30 Bolt
- 5) M3X20 Bolt
- 10) M3 Nut
- 4) M3X35 Bolt



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Fig 1.4 (Frame finished)

Part 2: Y-axis Assembly

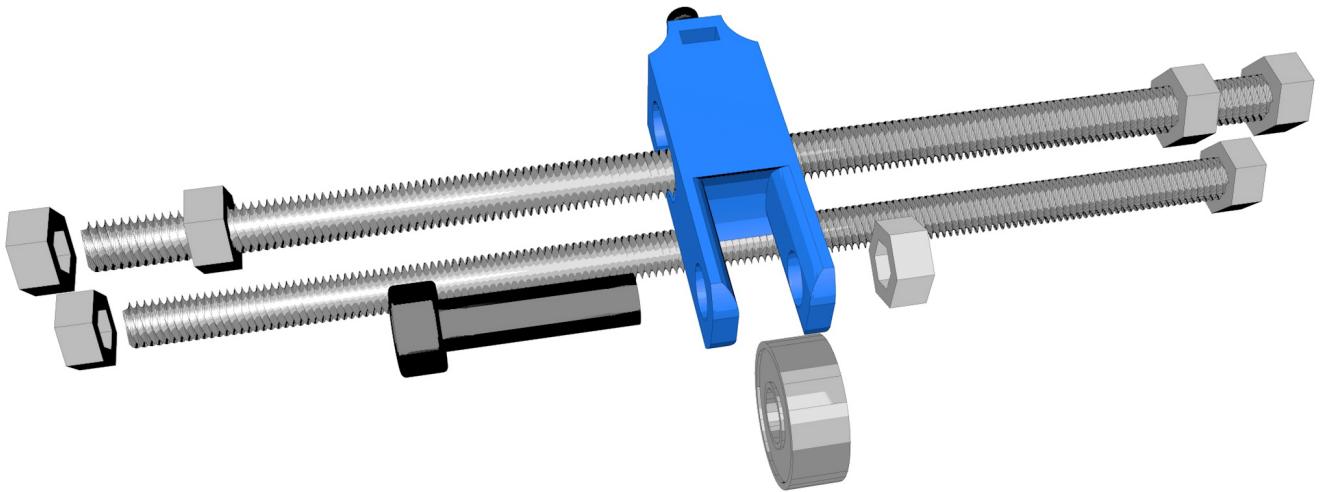


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Fig 2.1 (Y-axis rear)

Parts:

- 1) M8X325 rod
- 1) M8X205 rod
- 1) Low torque motor
- 1) GT2 Pulley
- 1) M3 grub screw
- 8) M8 Nut
- 2) M3X10 Bolt
- 1) Y motor mount



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Fig 2.2 (Y-axis Front)

Parts:

- 2) M8X205 rod
- 1) Y Idler
- 1) 608ZZ Bearing
- 1) M8X30 Bolt
- 7) M8 Nut
- 1) M3X30 Bolt
- 1) M3 Nut

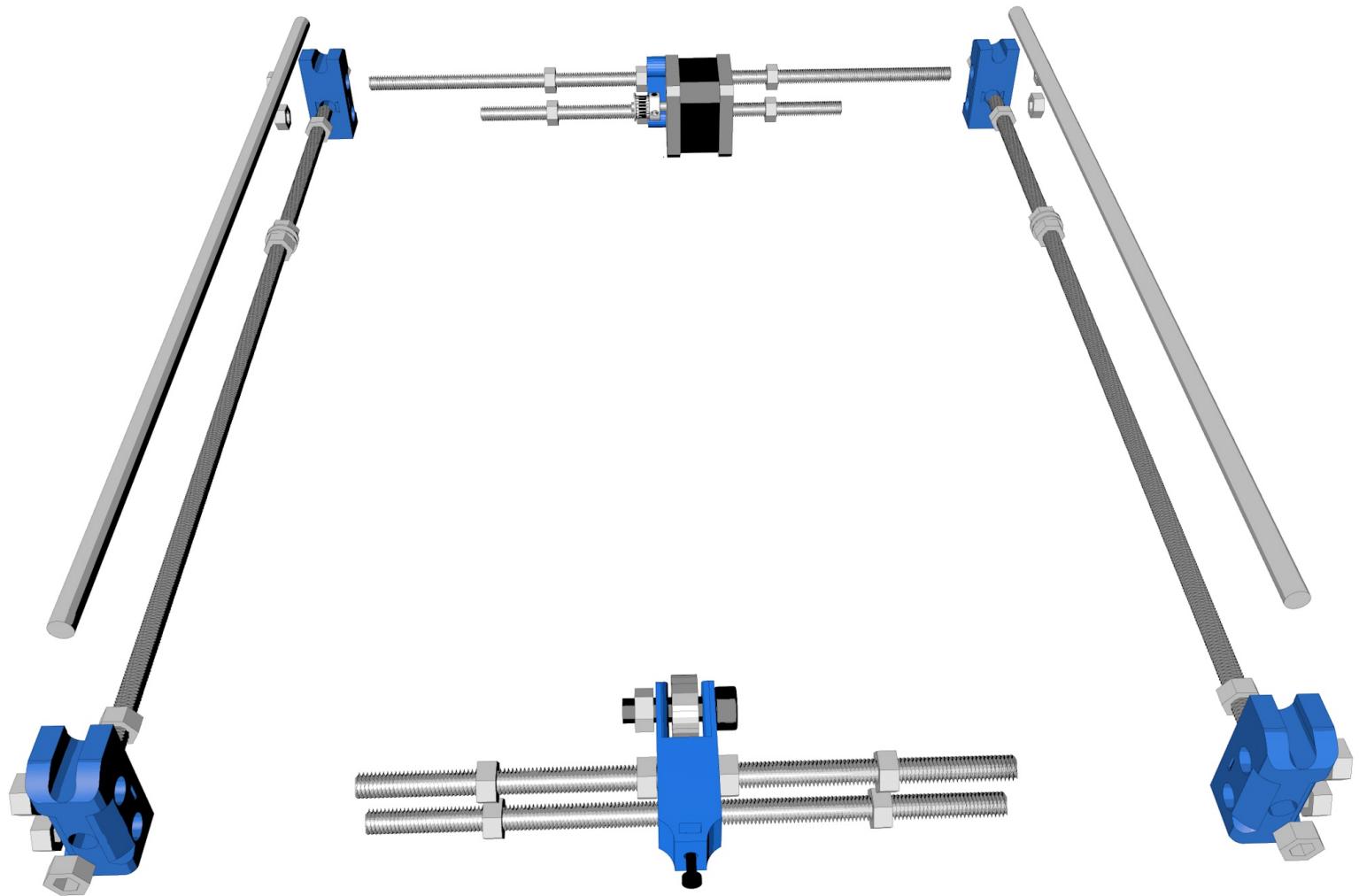


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Fig 2.3 (Y side rods)

Parts:

- 2) M8X430 rod (i3x)
- 2) M8X530 rod (i3xl)
- 8) M8 Nut
- 4) M8 Washer

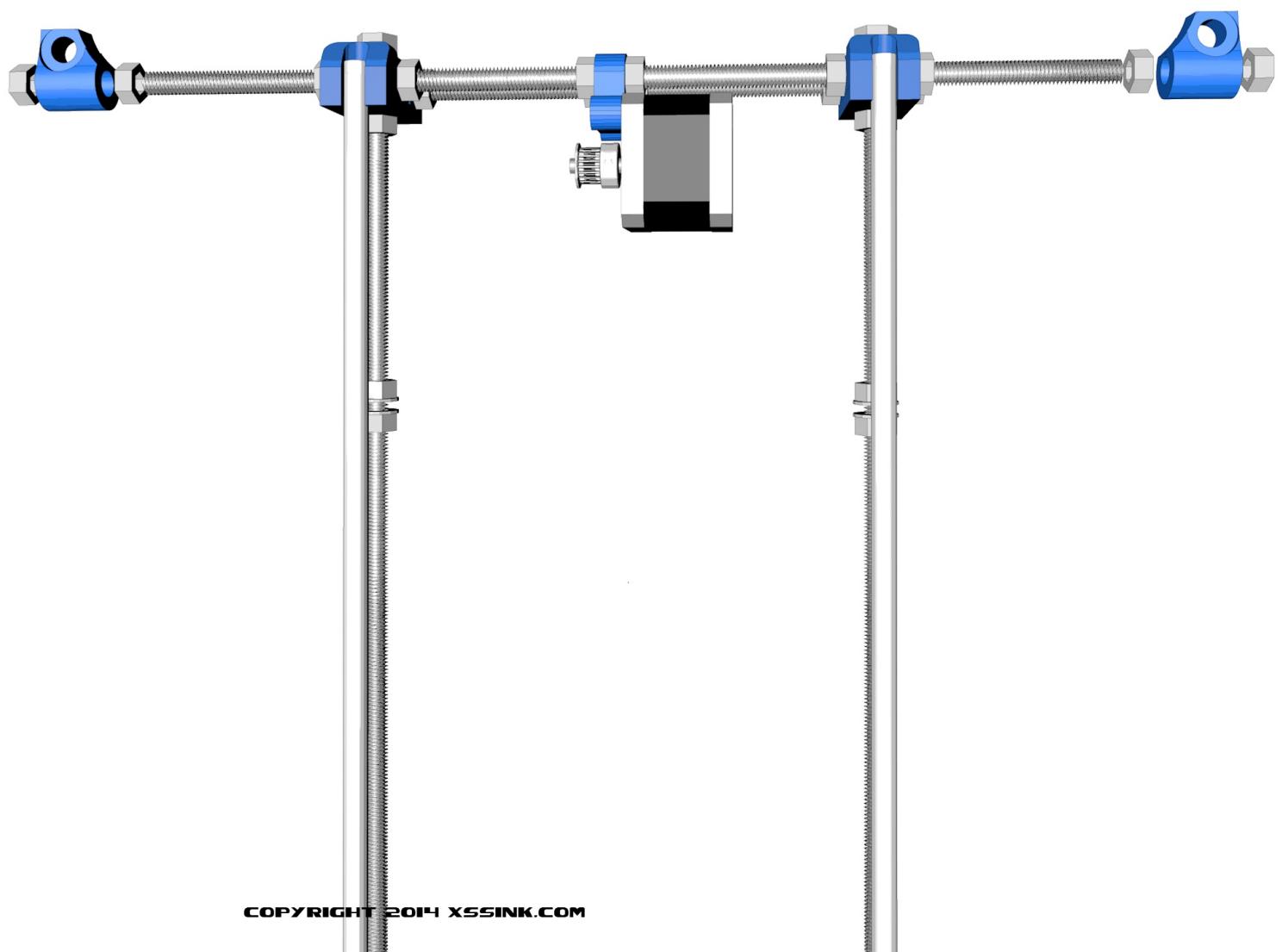


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Fig 2.4 (Final Y assembly)

Parts:

- 2) M8X405 smooth rod (i3x)
- 2) M8X505 smooth rod (i3xl)
- 4) Y Axis Corner (Printed)
- 12) M8 Nut

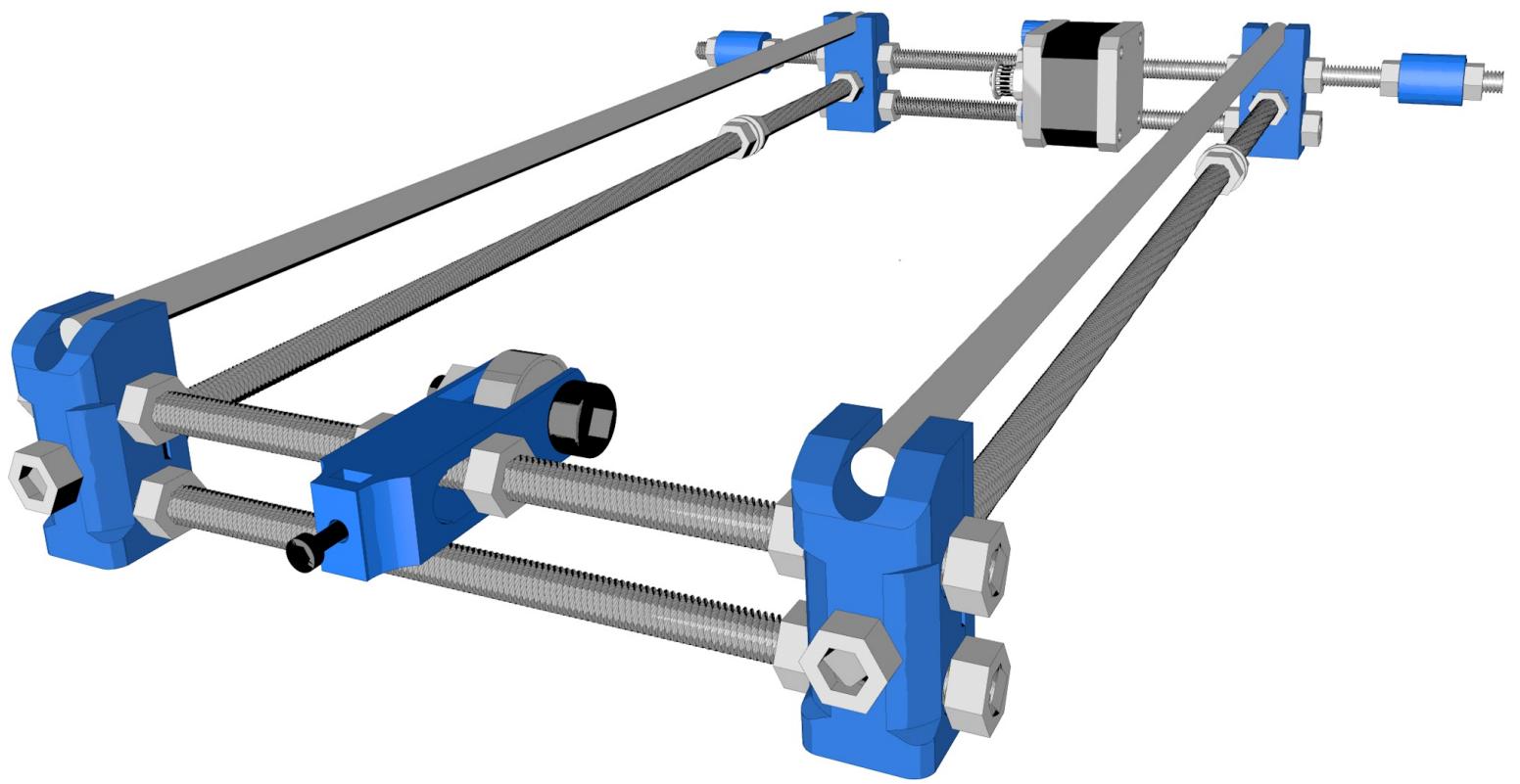


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Fig 2.5 (Z-supports)

Parts:

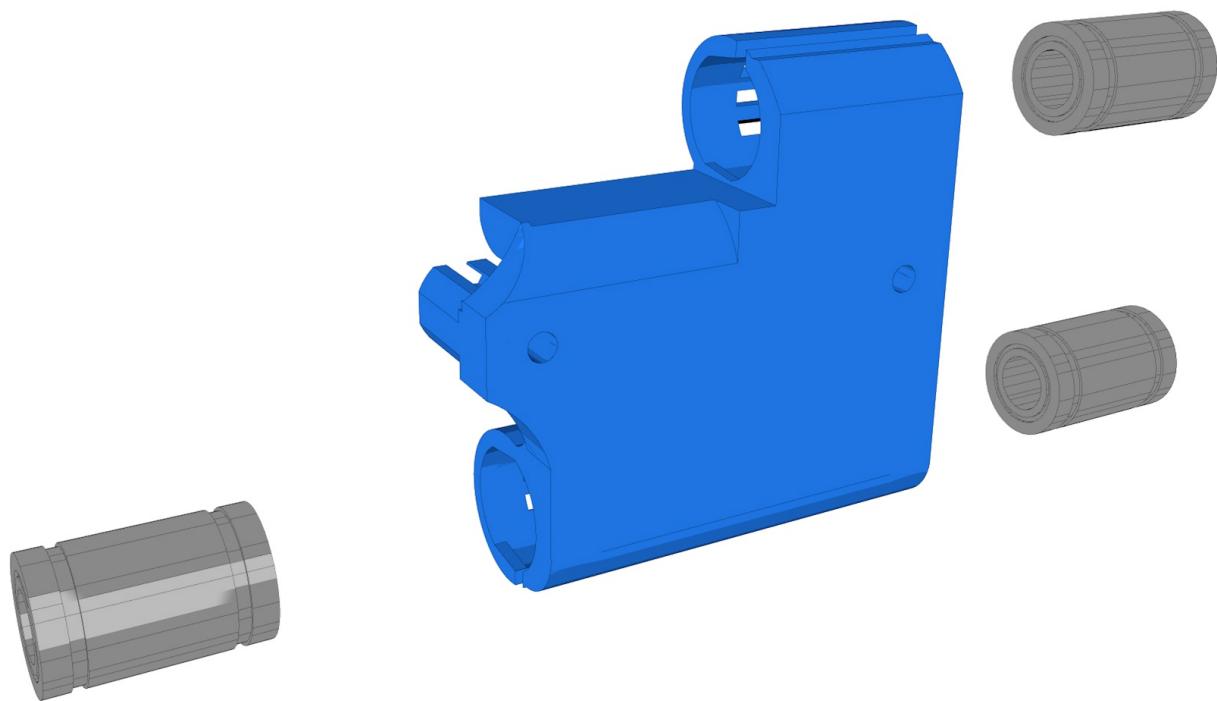
- 2) Support Lower (Printed)
- 4) M8 Nut



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Fig. 2.6 (Y-axis finished)

Part 3: X-axis Assembly

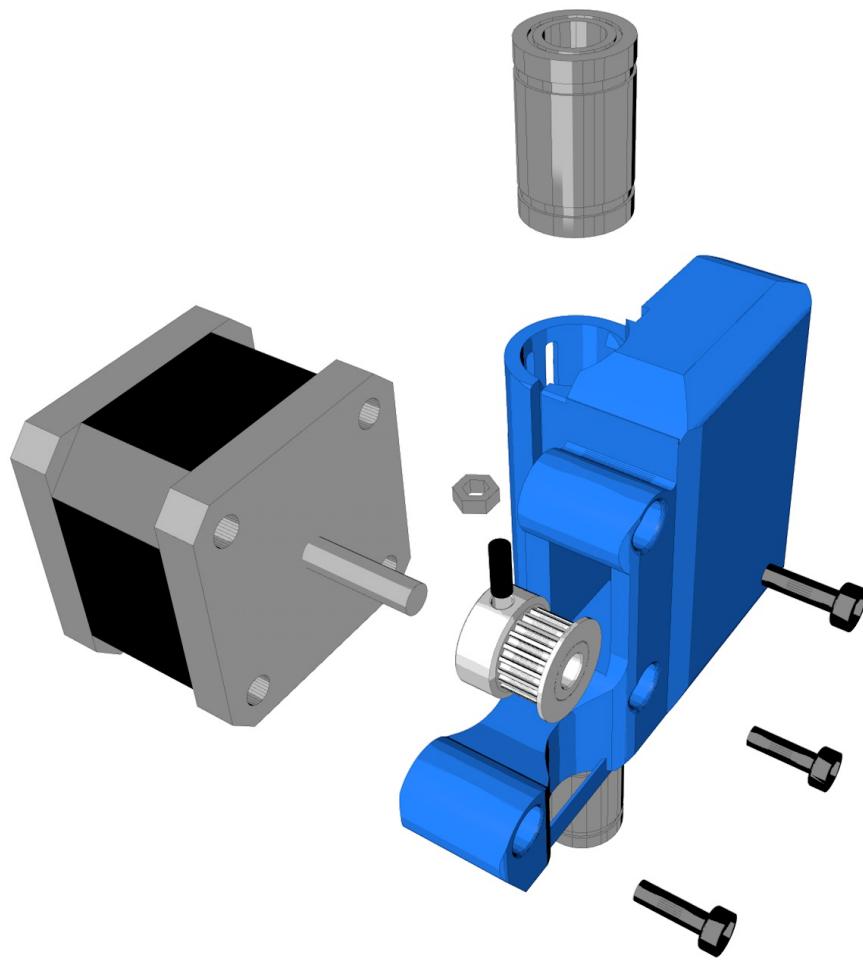


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Fig 3.1

Parts:

- 1) X-carriage (Printed)
- 3) LM8UU Bearing

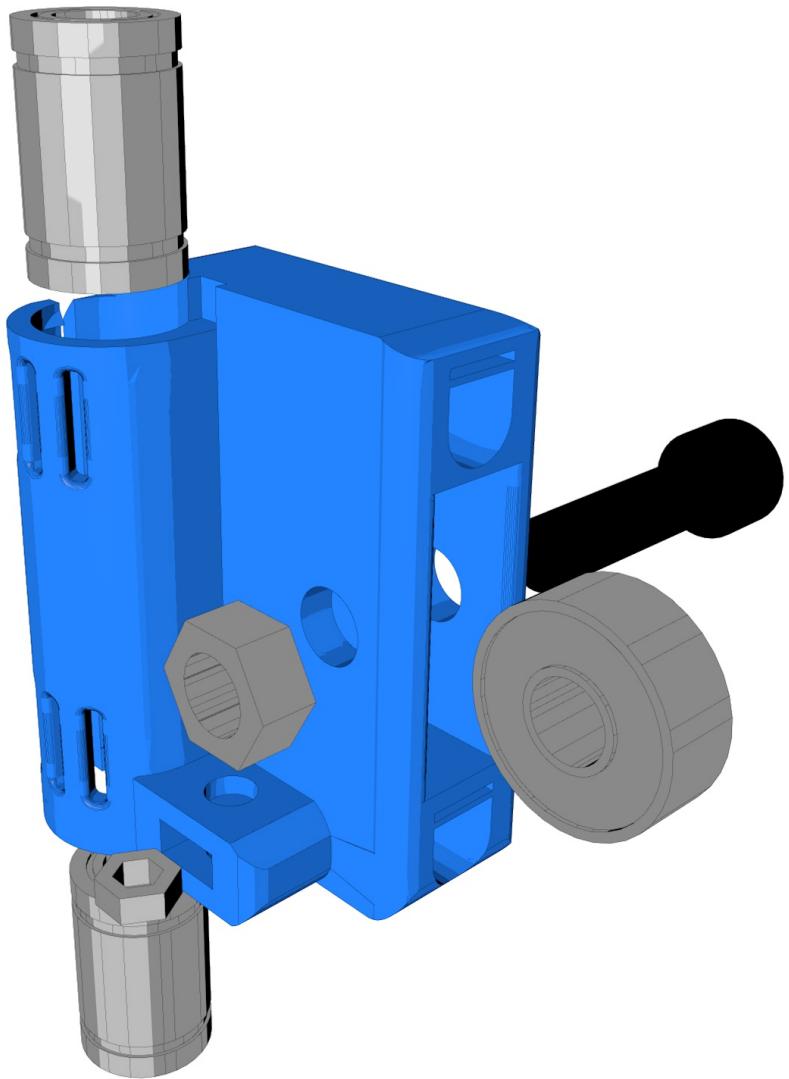


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Fig 3.2

Parts:

- 1) X motor end (Printed)
- 1) Low torque motor
- 1) GT2 Pulley
- 1) M3 grub screw
- 2) LM8UU Bearing
- 3) M3X10 Bolt
- 1) M5 Nut

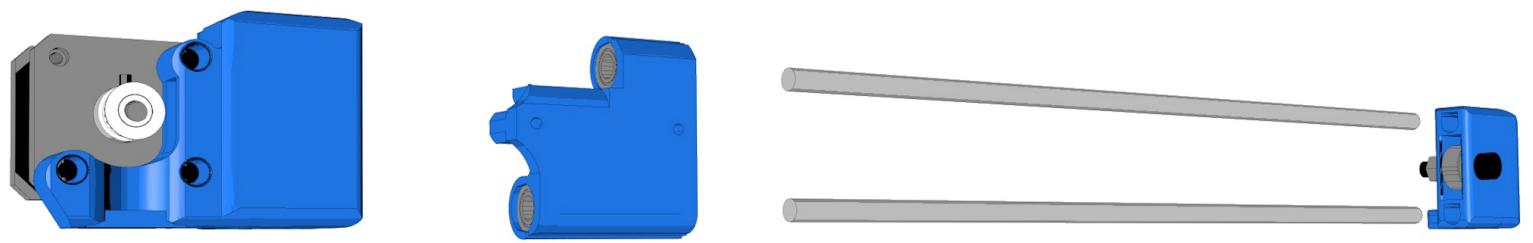


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Fig 3.3

Parts:

- 1) X idler end (Printed)
- 2) LM8UU Bearing
- 1) 608ZZ Bearing
- 1) M8X30 Bolt
- 1) M8 Nut
- 1) M5 Nut

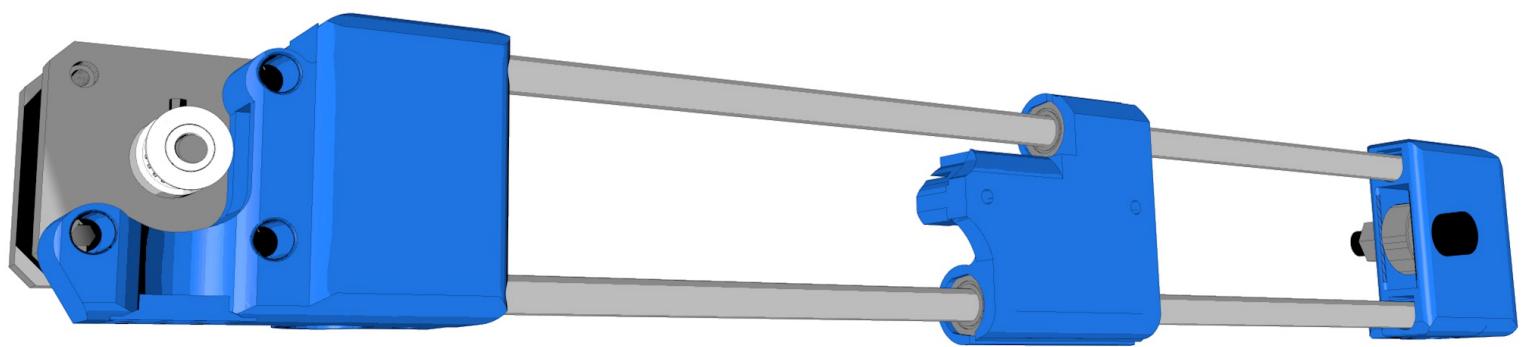


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Fig 3.4 (X-axis final assembly)

Parts:

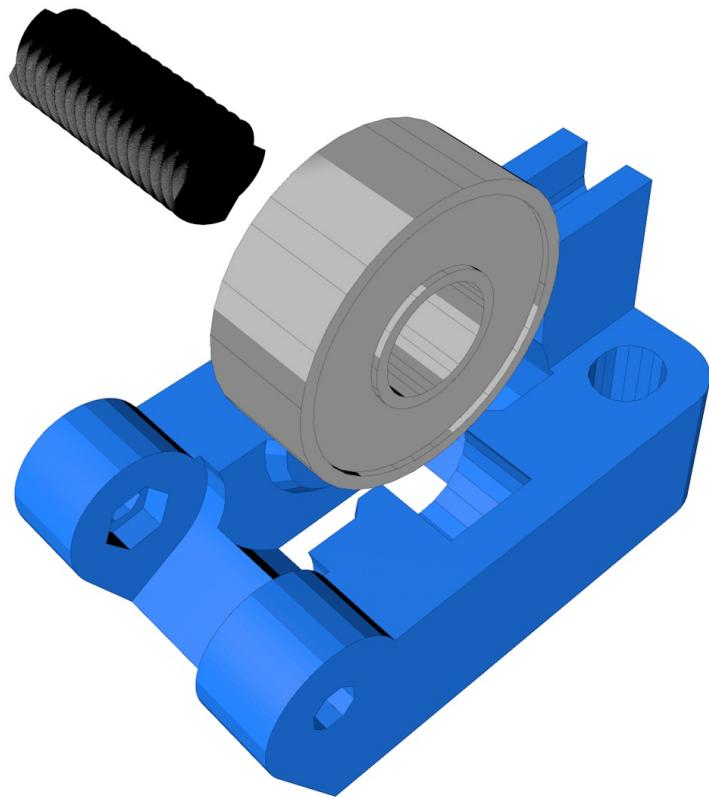
- 2) 370mm Smooth Rods



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Fig 3.5 (X-axis assembled)

Part 4: Extruder Assembly

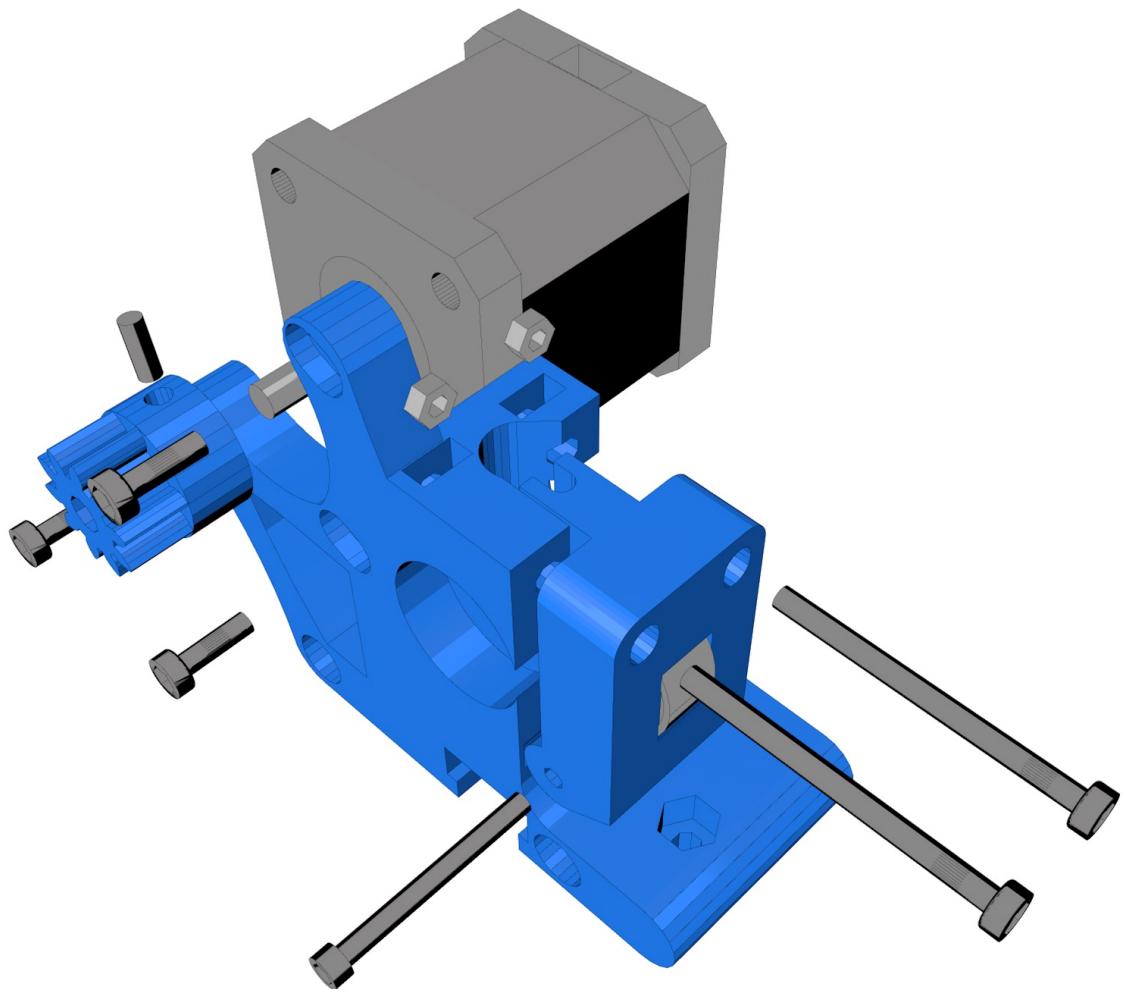


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Fig 4.1 (Extruder hinge)

Parts:

- 1) 608ZZ Bearing
- 1) M8X20 GrubscREW
- 1) Greg's hinge (Printed)

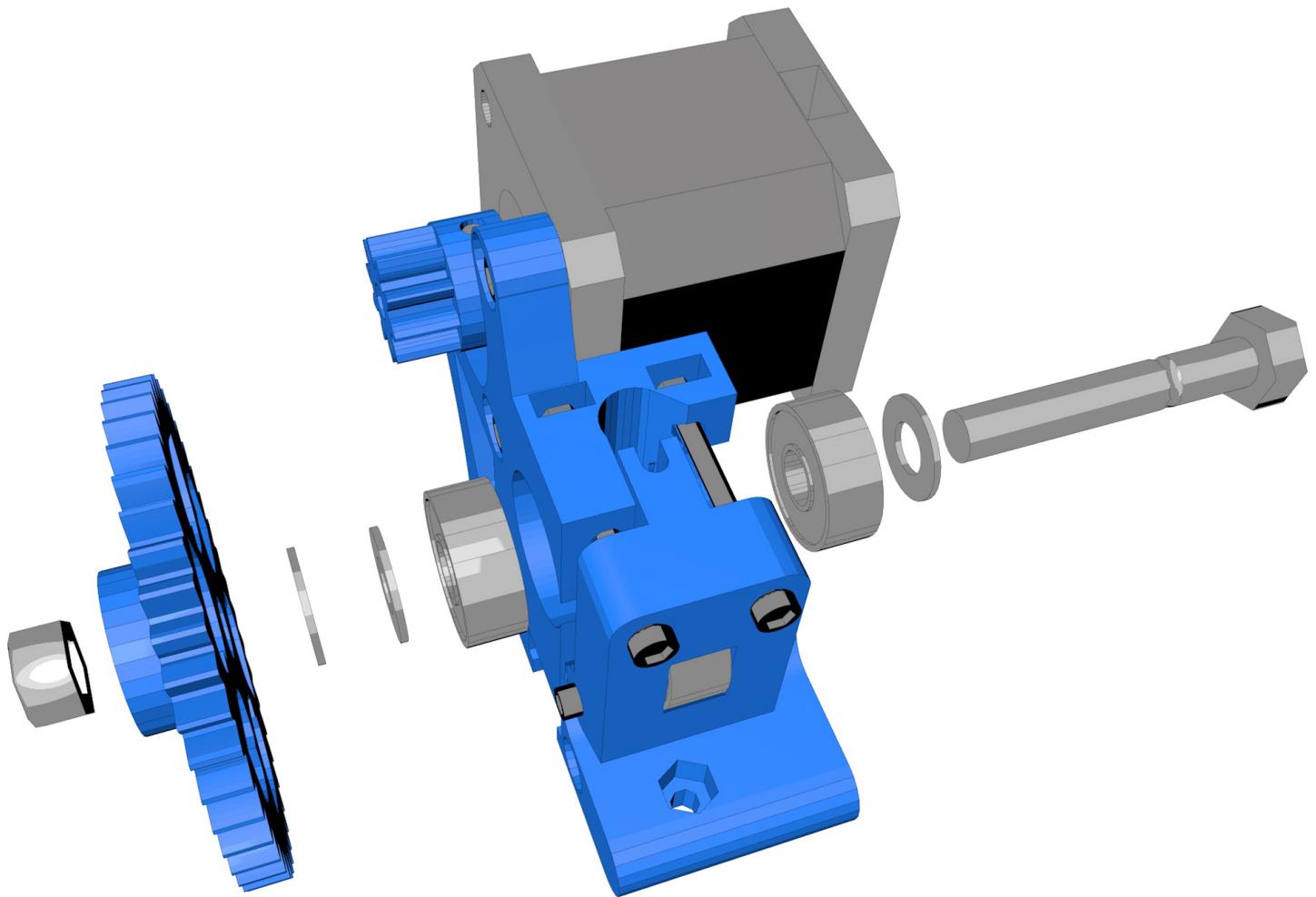


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Fig 4.2 (Extruder body)

Parts:

- 1) Greg's hinge (Assembled)
- 1) Greg's body (Printed)
- 1) Small gear (Printed)
- 1) High torque motor
- 1) M3 grub screw
- 3) M3X10 Bolt
- 1) M3X30 Bolt
- 2) M4X50 Bolt
- 2) M4 Nut
- 2) M3 Nut

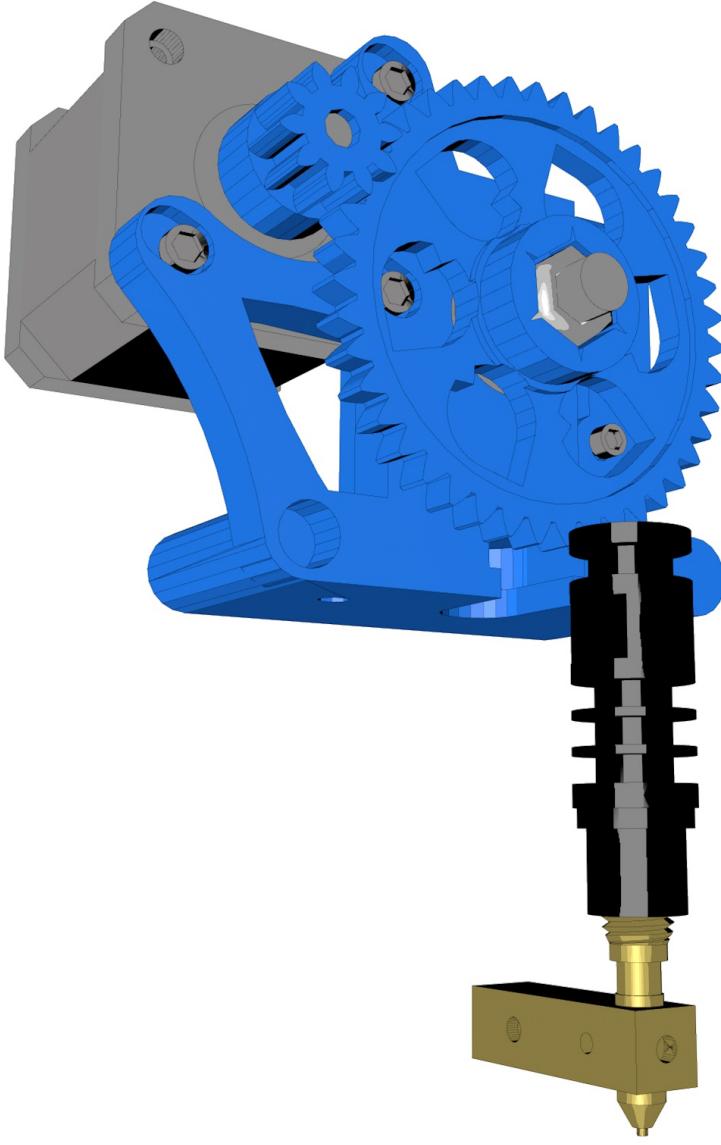


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Fig 4.3 (Hobbed bolt assembly)

Parts:

- 1) Big gear (Printed)
- 1) M8X50 Hobbed bolt
- 2) 608ZZ Bearing
- 1) M8 Nyloc Nut
- 3) M8 Washer

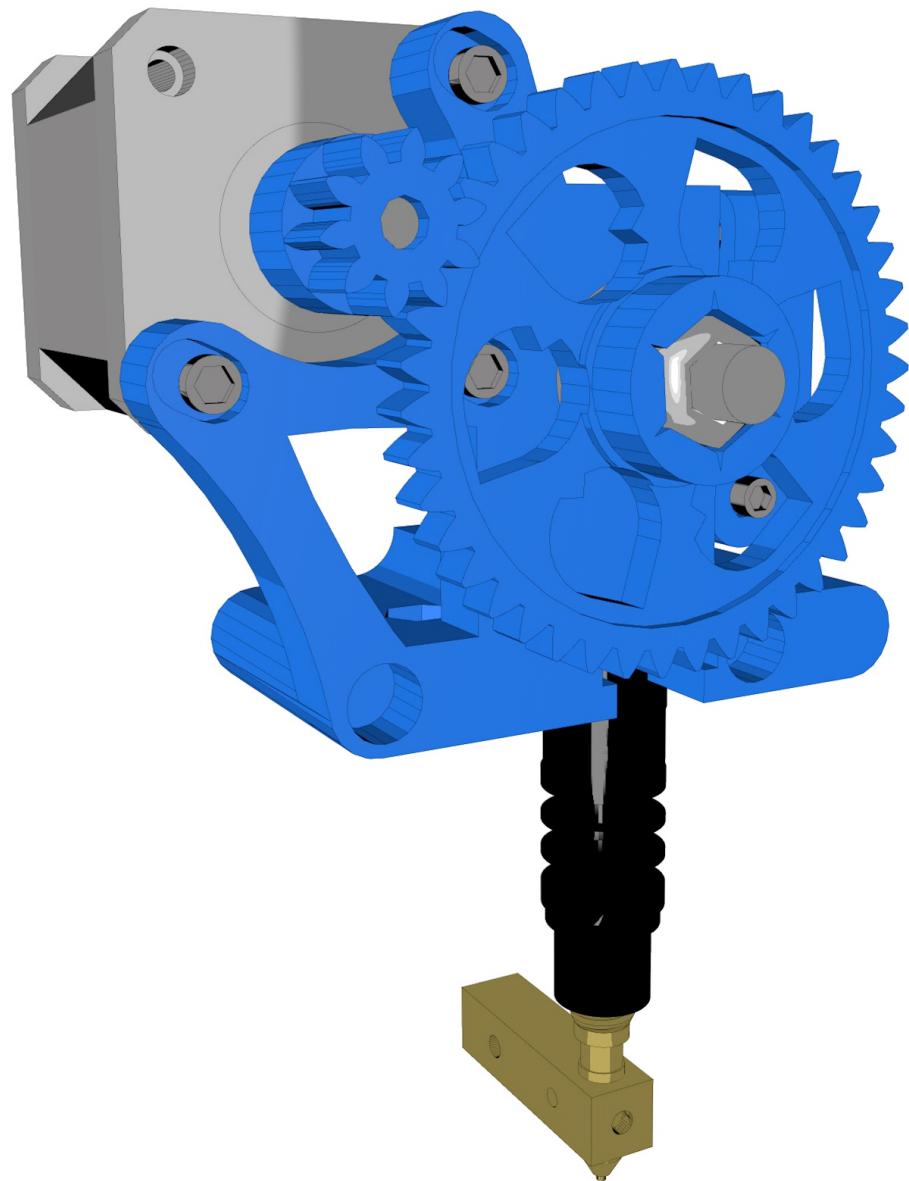


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Fig 4.4 (Hotend mounting)

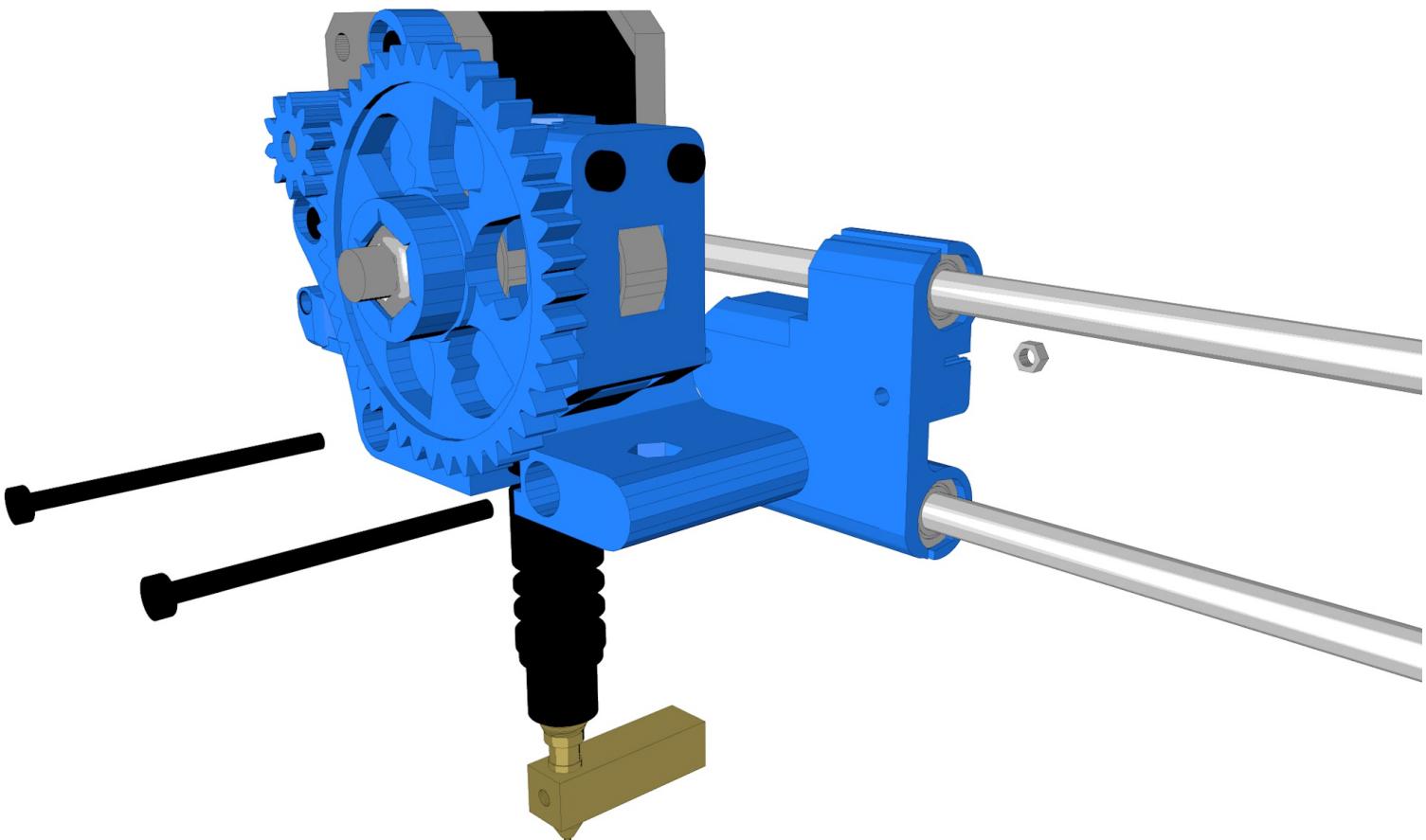
Parts:

- 1) Crayon hotend



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Fig 4.5 (Extruder assembled)

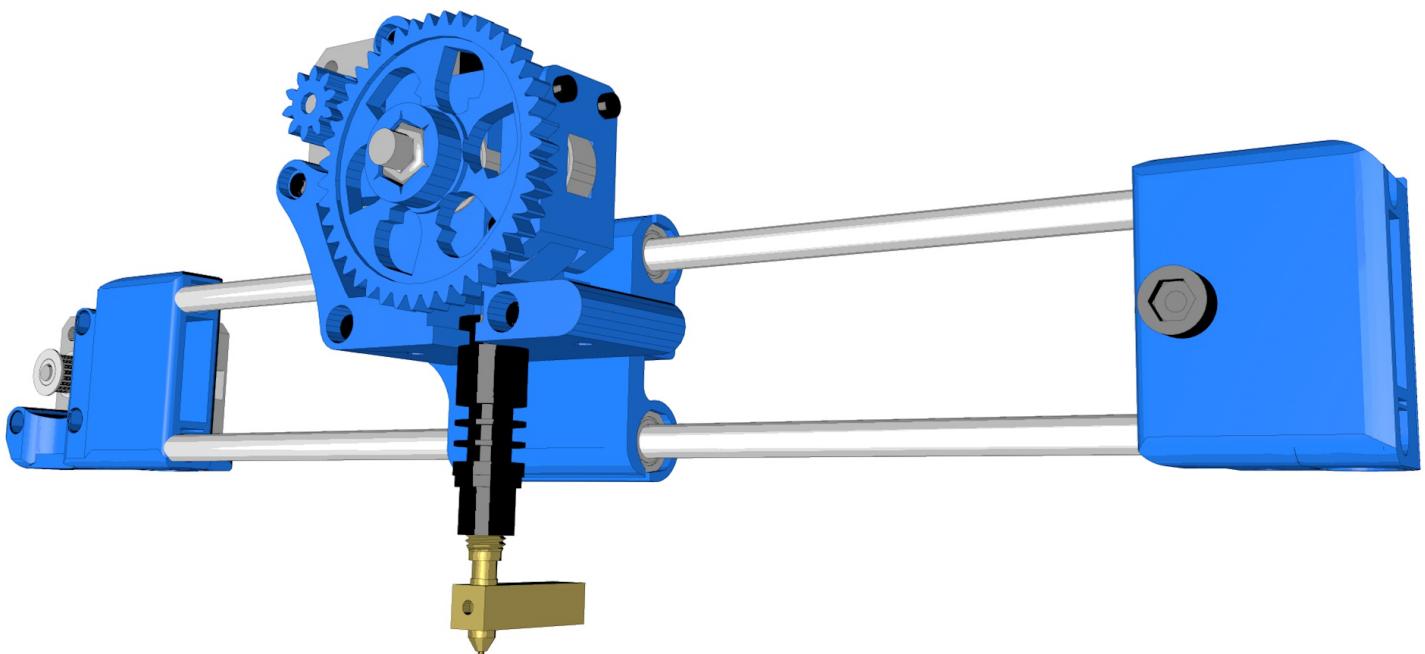


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Fig 4.6 (Extruder mounting)

Parts:

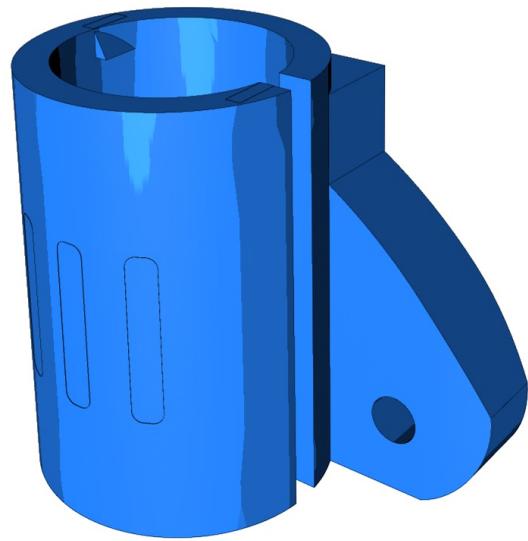
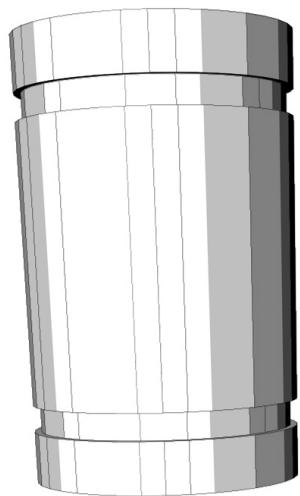
- 2) #6-32X2" Bolt
- 2) #6-32 Nut



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Fig 4.7 (X-axis assembled)

Part 5: Bed Assembly



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Fig 5.1 (Y bushing)

X3 (i3x/a)

X4 (i3xl/Ω)

Parts:

- 1) Y-bushing (Printed)
- 1) LM8UU Bearing

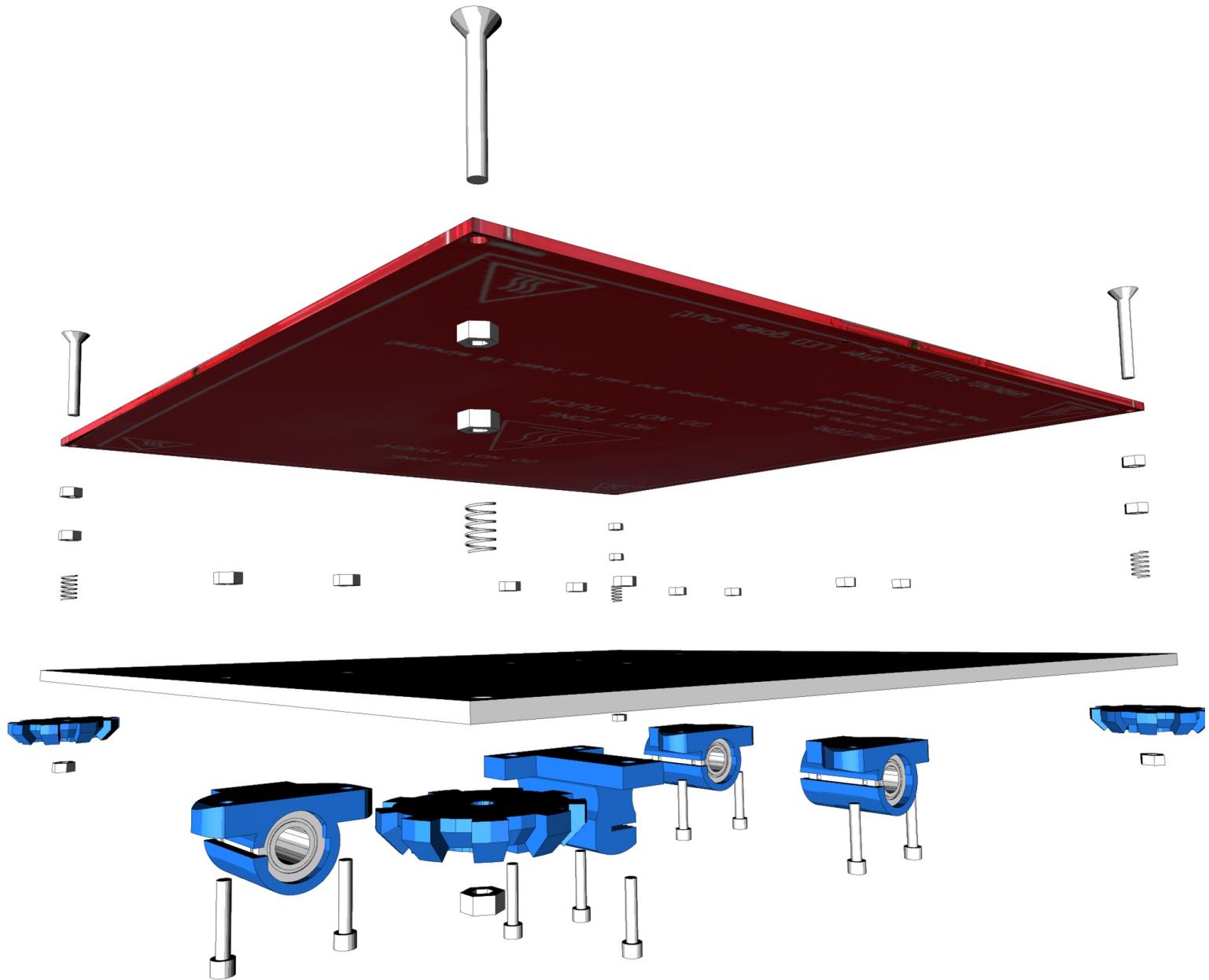


Fig 5.2 (Bed assembly 9X9)

Parts:

- 3) Y-bushing (Assembled)
- 1) PCB Heated bed
- 1) Aluminum bottom plate
- 1) Y belt holder
- 4) 11mm Springs
- 4) M3X20 Bolt
- 9) M3X16 Bolt
- 21) M3 Nuts

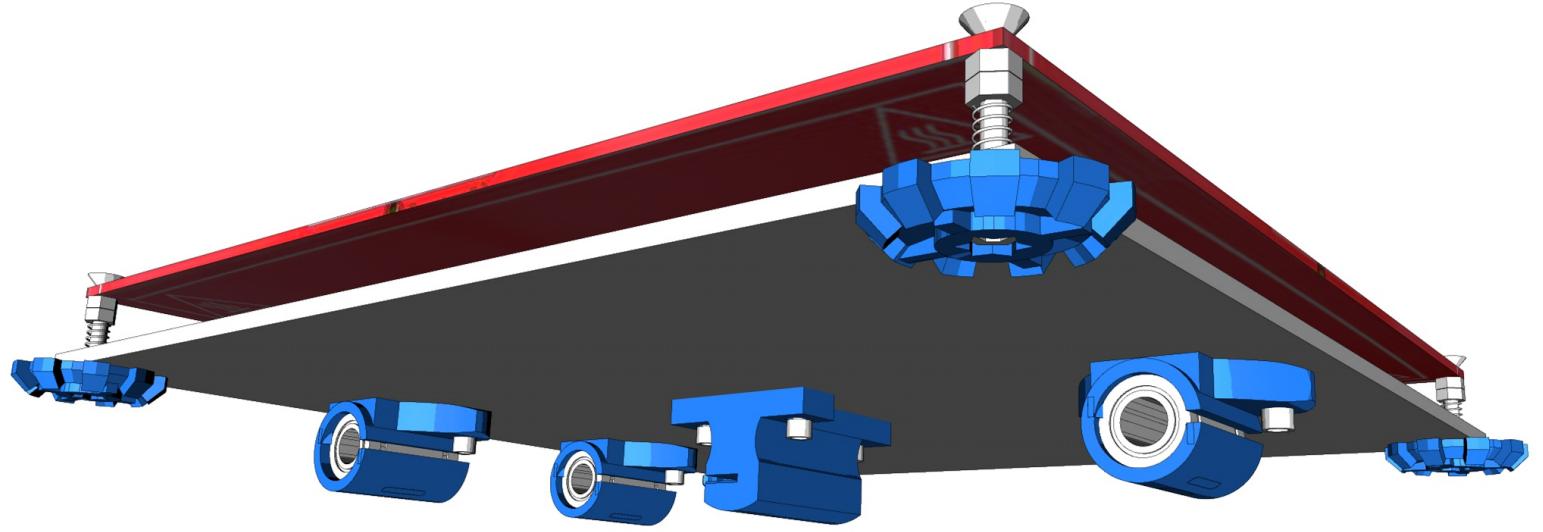


Fig 5.3 (9X9 Bed Assembled)

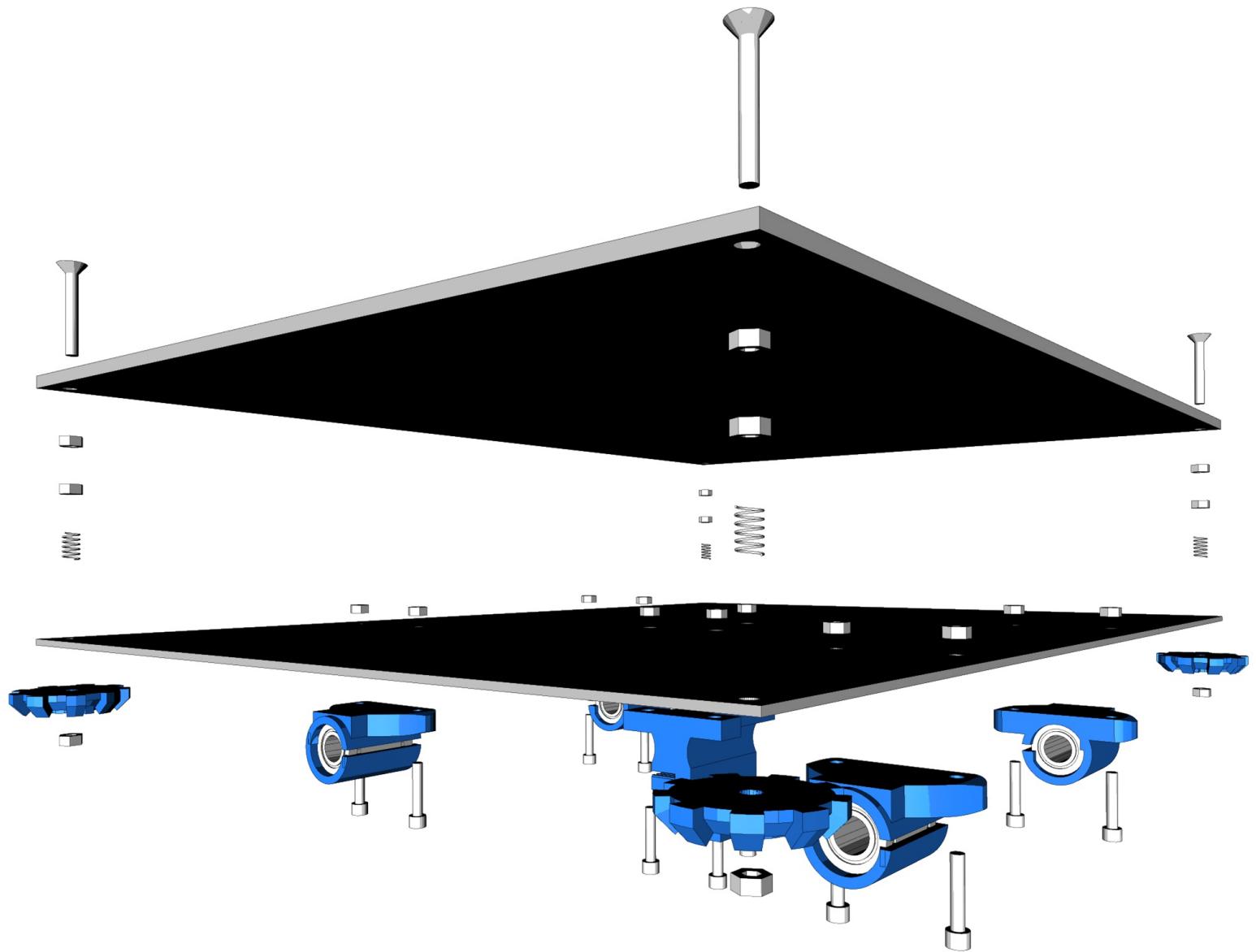


Fig 5.4 (Bed assembly 9X12)

Parts:

- 4) Y-bushing (Assembled)
- 1) Aluminum top plate
- 1) Aluminum bottom plate
- 1) Y belt holder
- 4) 11mm Springs
- 4) M3X20 Bolt
- 11) M3X16 Bolt
- 23) M3 Nuts

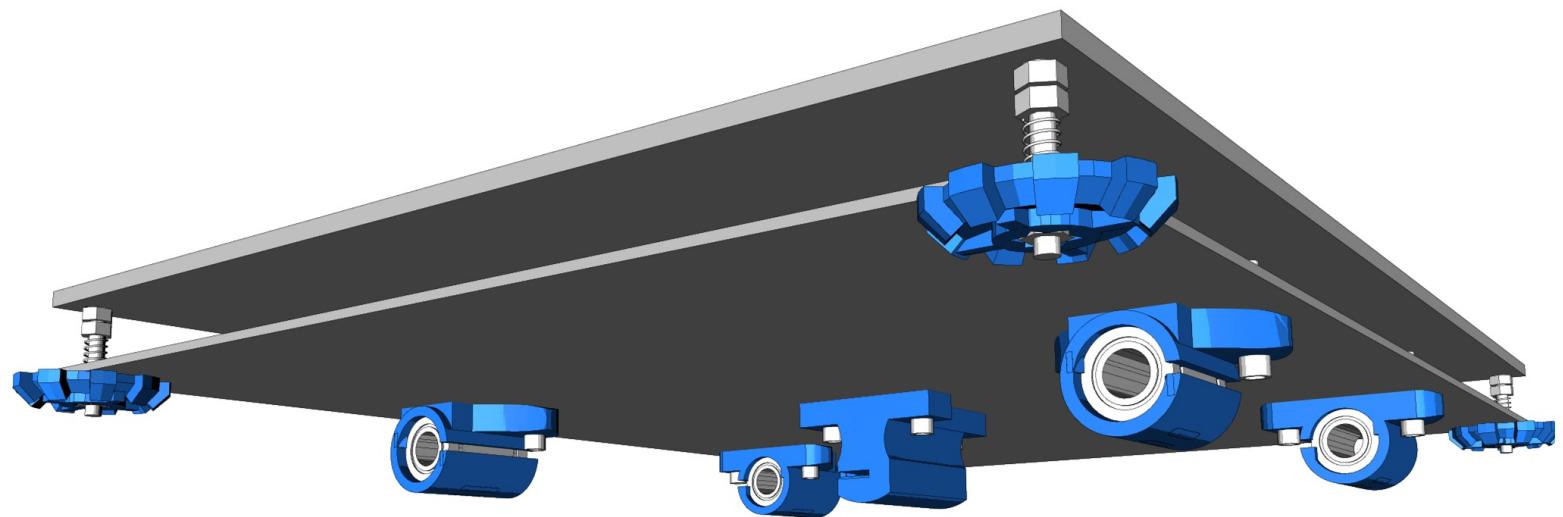


Fig 5.5 (9X12 Bed Assembled)

Part 6: Final Assembly

1: Base to Frame

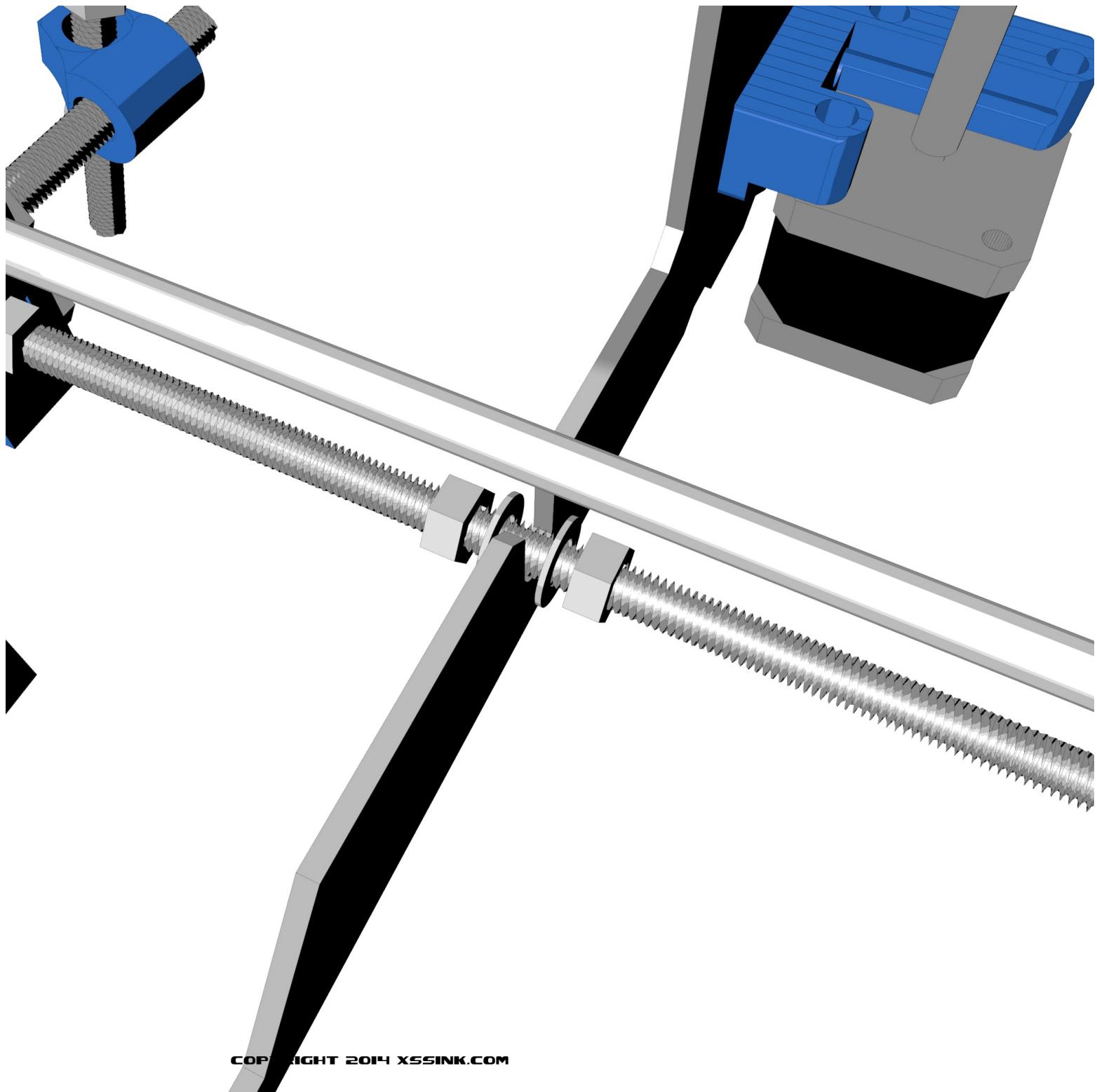
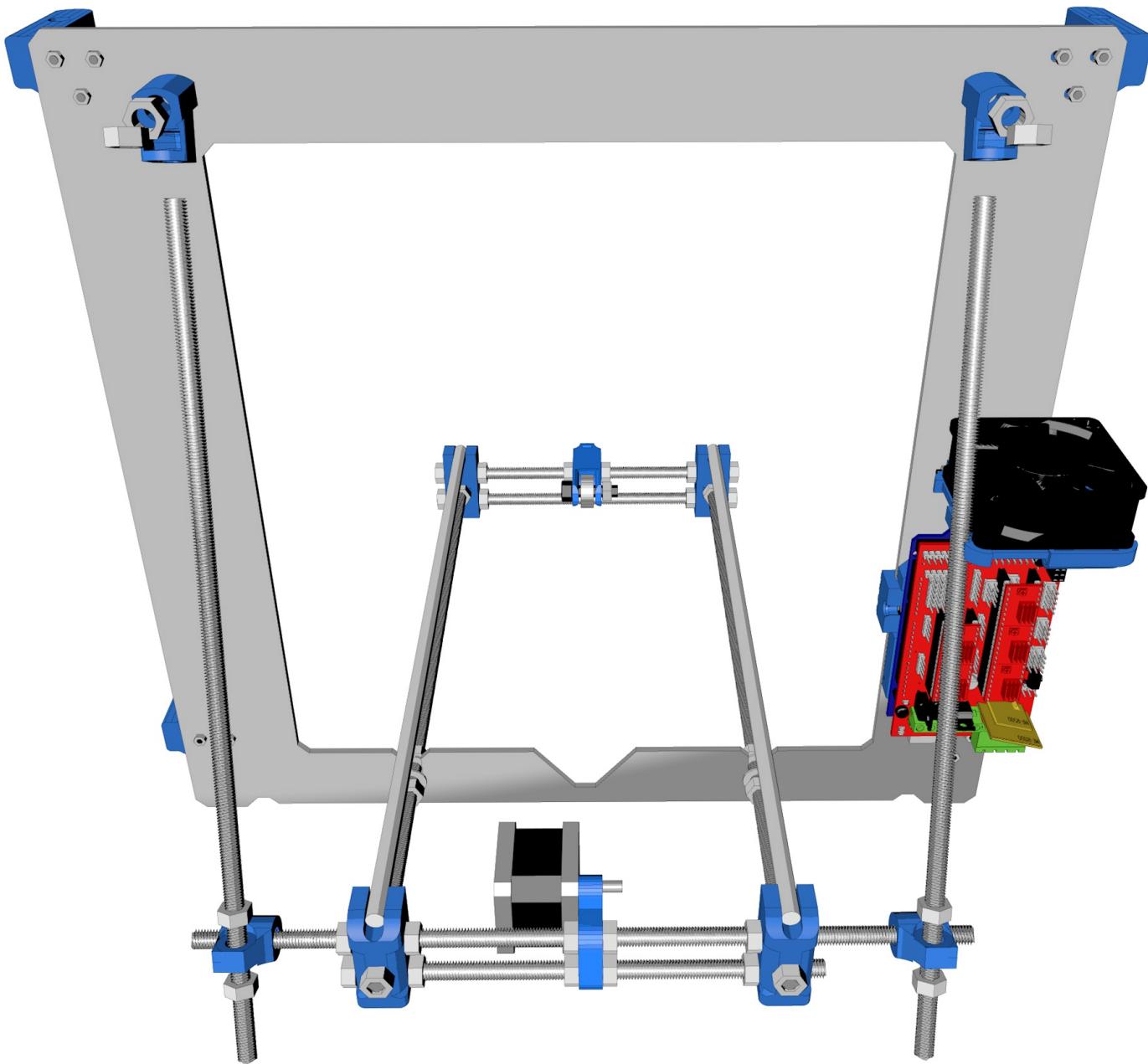


Fig. 6.1

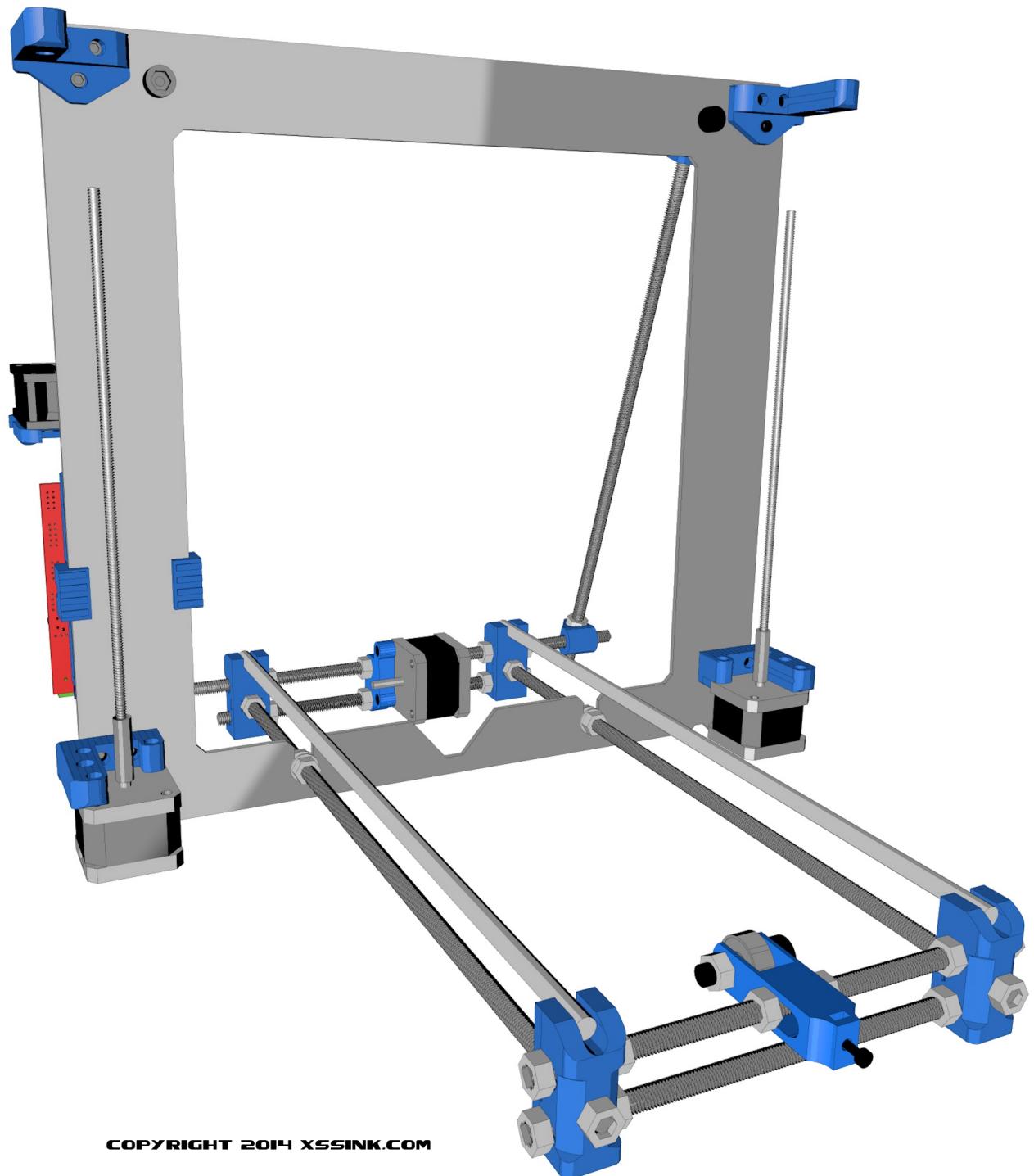


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Fig. 6.2

Parts:

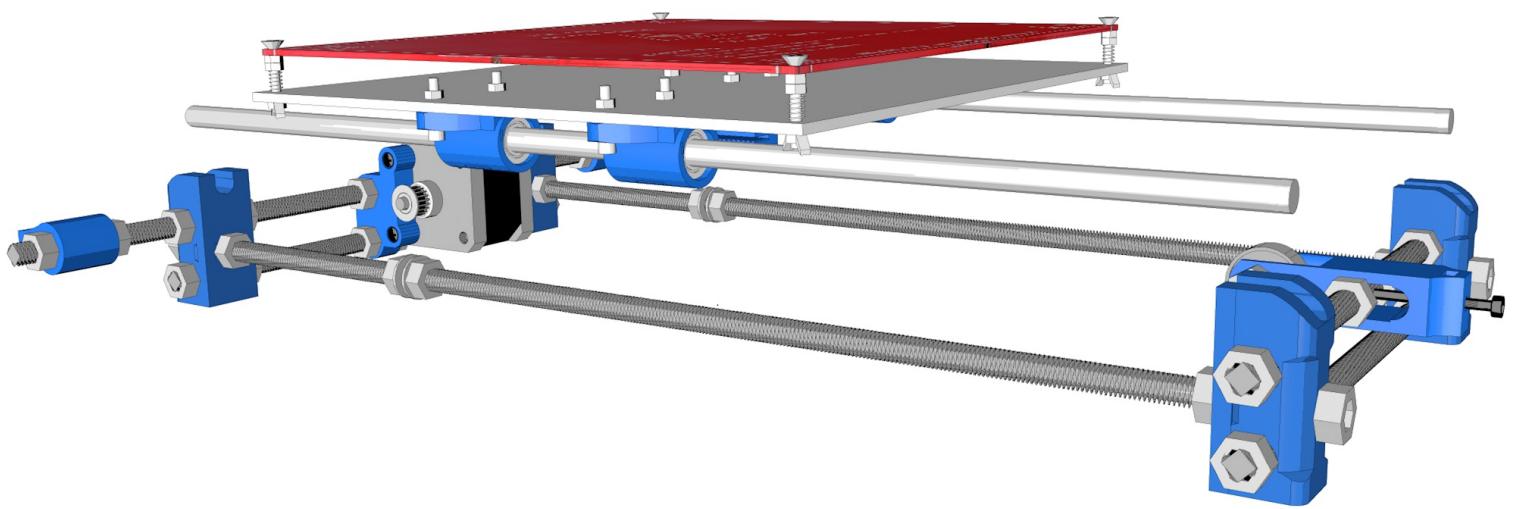
- 2) Support Upper (Printed)
- 2) M8X30 Bolt
- 8) M8 Nut



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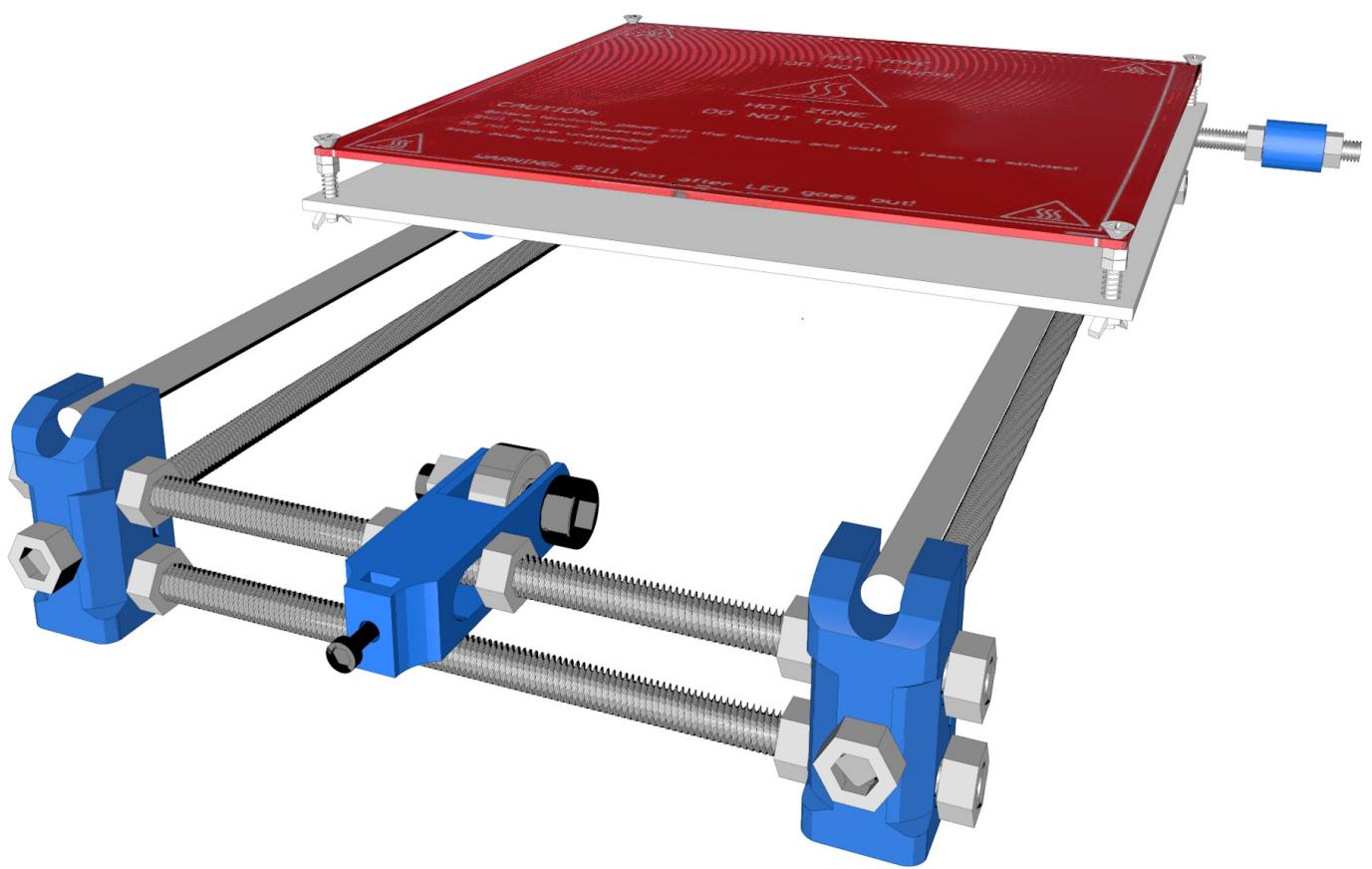
Fig. 6.3

2: Base to Frame



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Fig. 6.4



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Fig. 6.5

Y-belt:

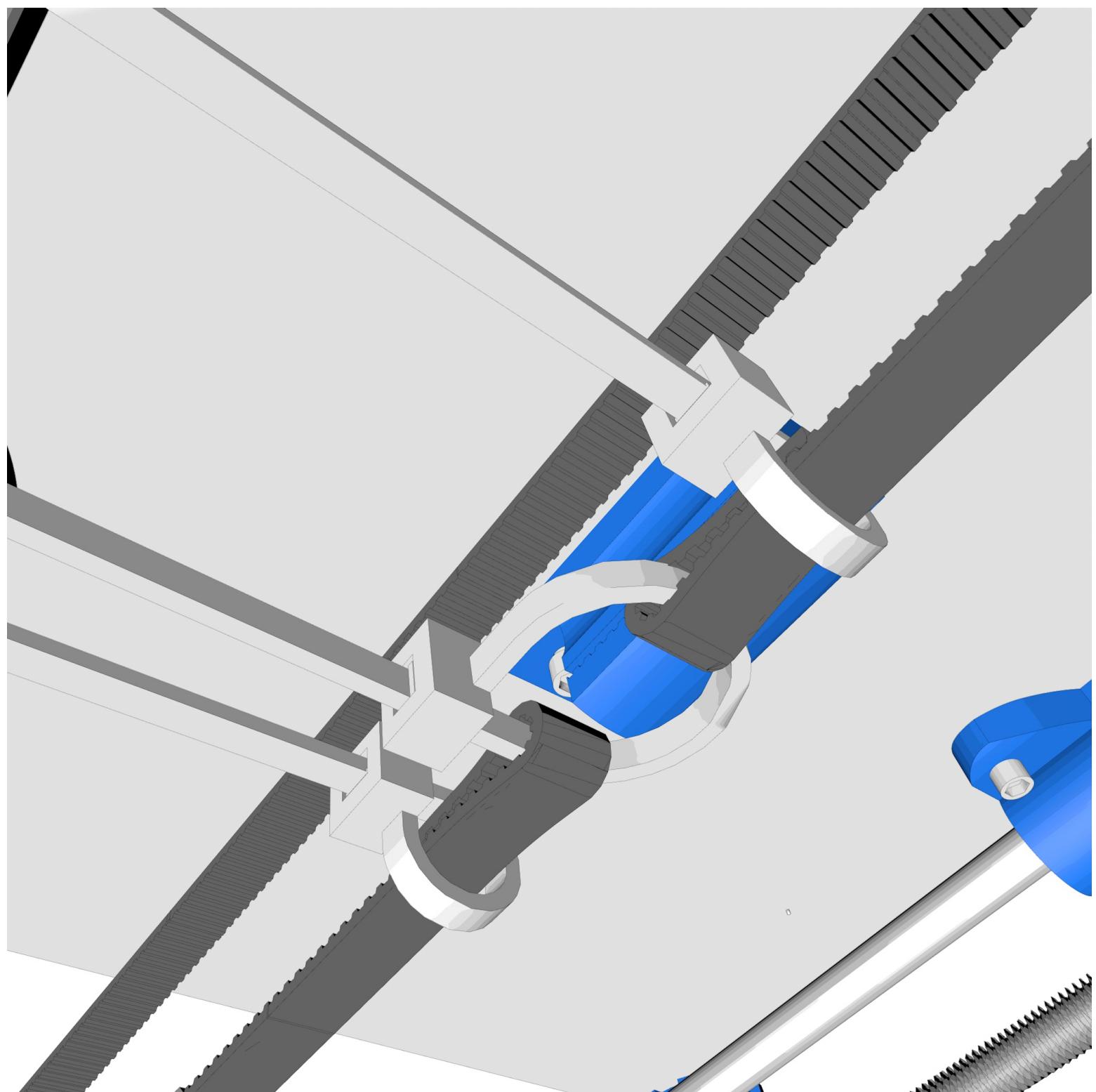


Fig. 6.6

Parts:

- 1) 1m Gt2 Belt
- 3) 4in Zipties

3: X-carriage to Frame

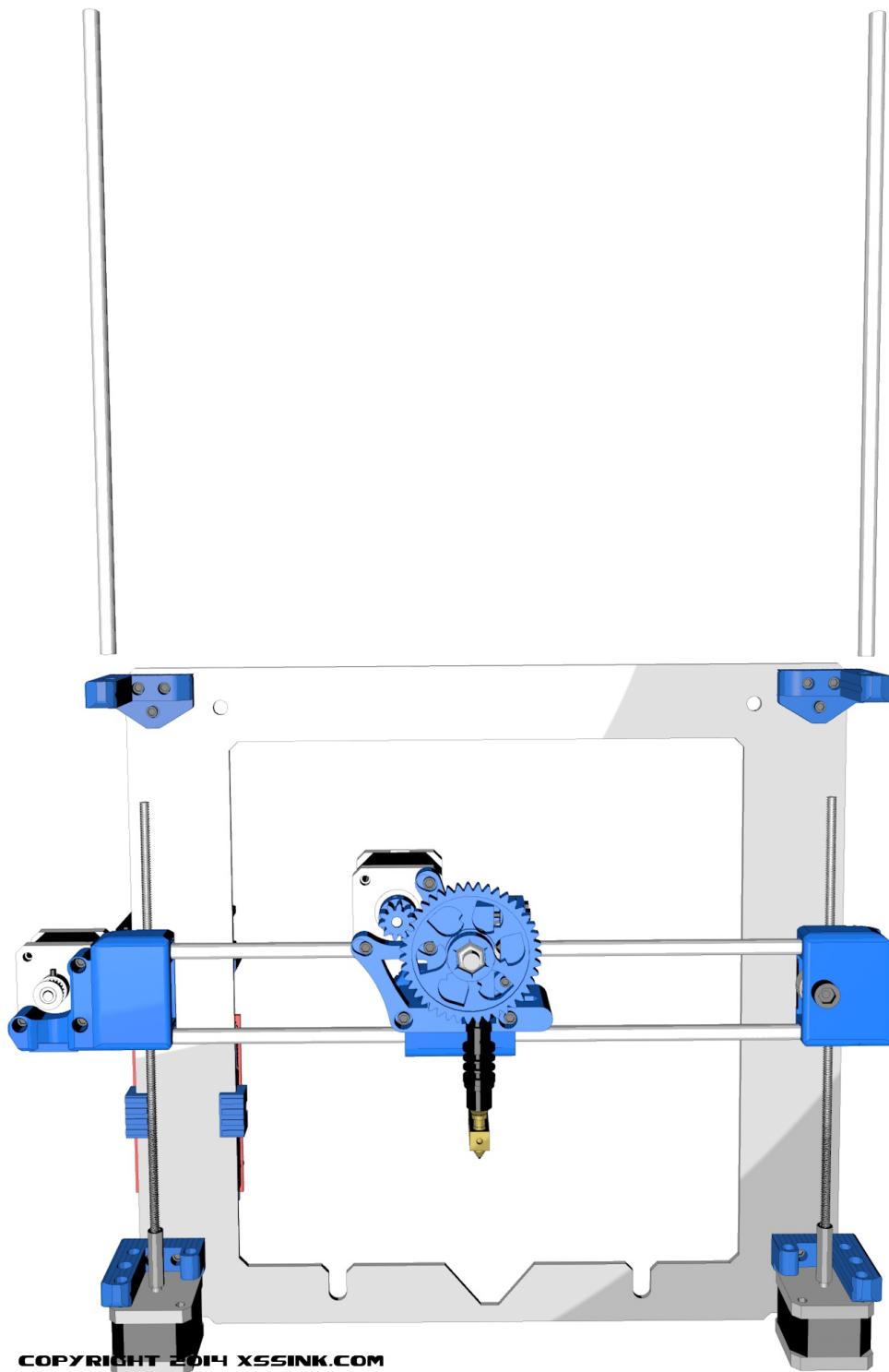
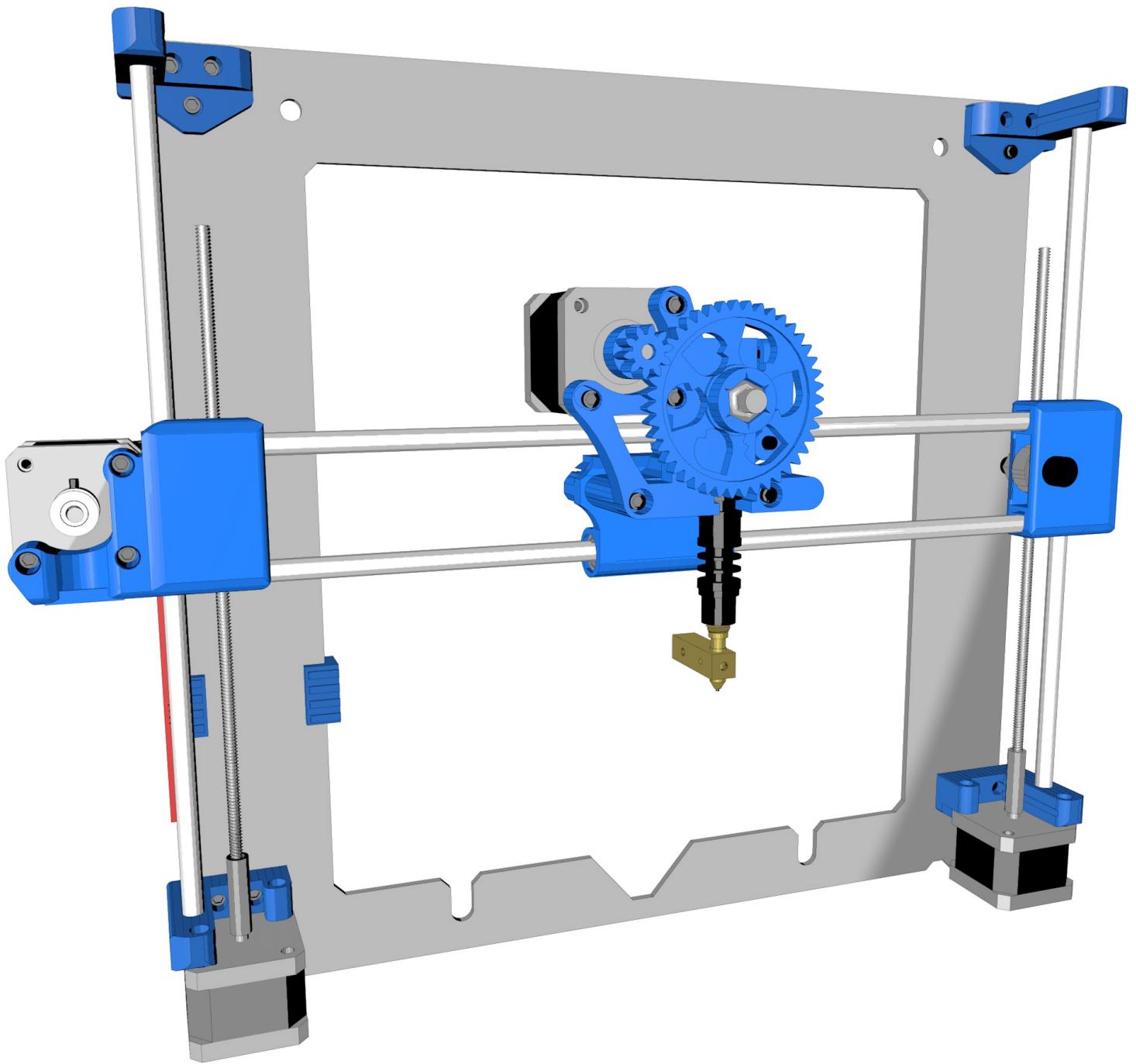


Fig. 6.7

Parts:

- 2) 320mm Smooth Rods



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Fig. 6.8

X-belt:

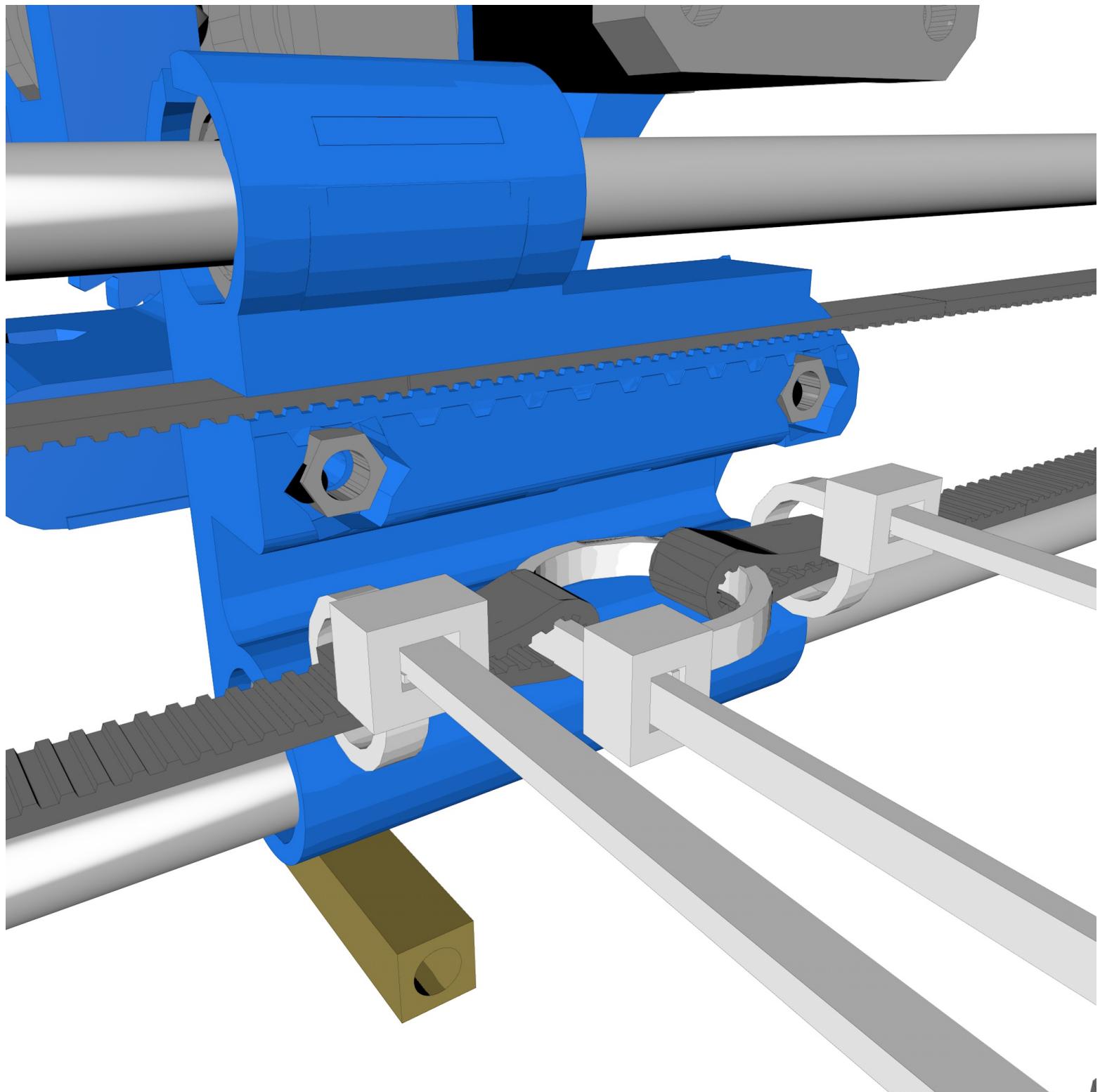


Fig 6.9

Parts:

- 1) 1m Gt2 Belt
- 3) 4in Zipties

4: Endstop Mounts

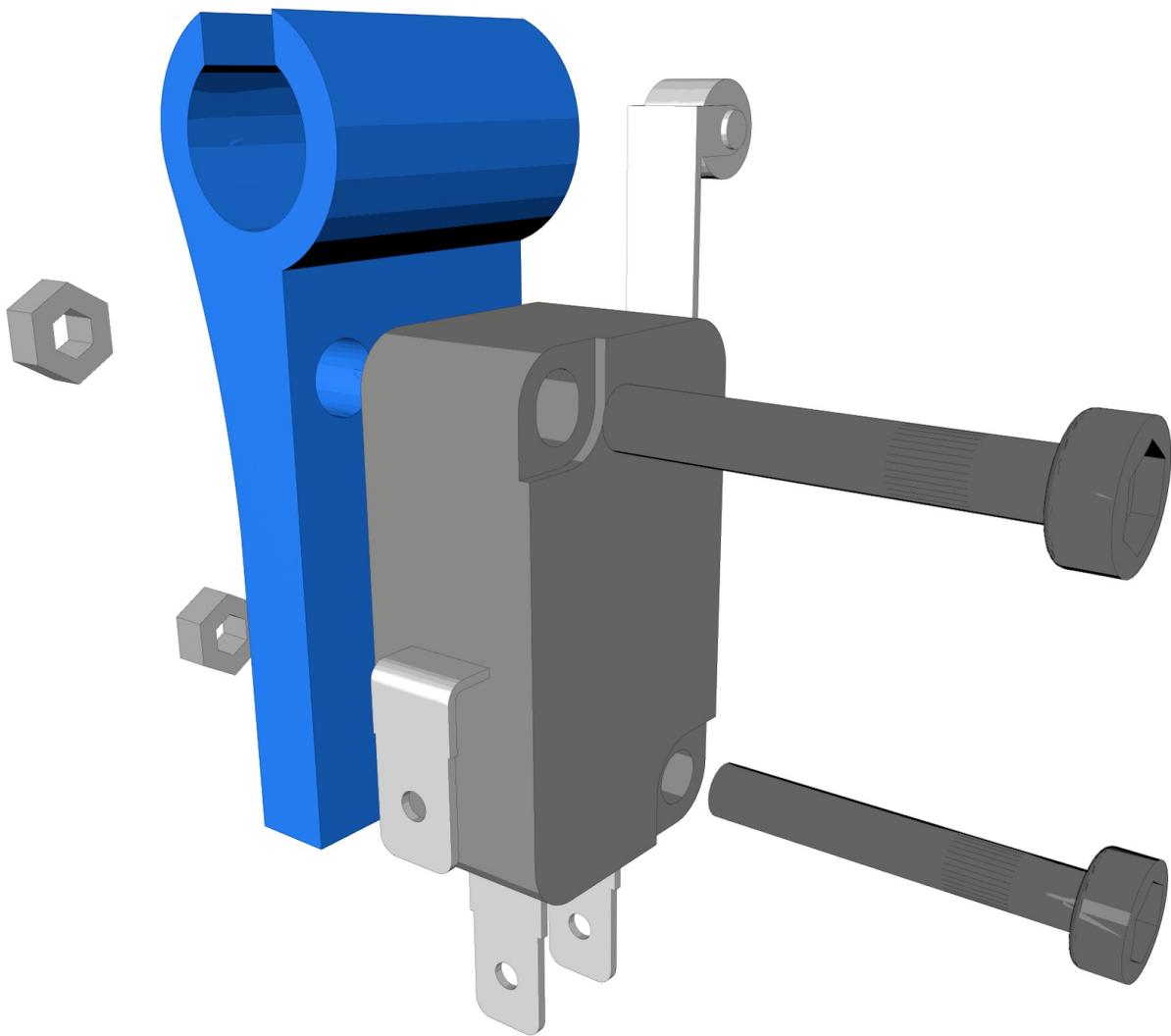


Fig 6.10 (Endstop assembly)

Parts:

- **3) Endstop Mount (Printed)**
- **3) Limit switches**
- **6) M3X20 Bolt**
- **6) M3 Nut**

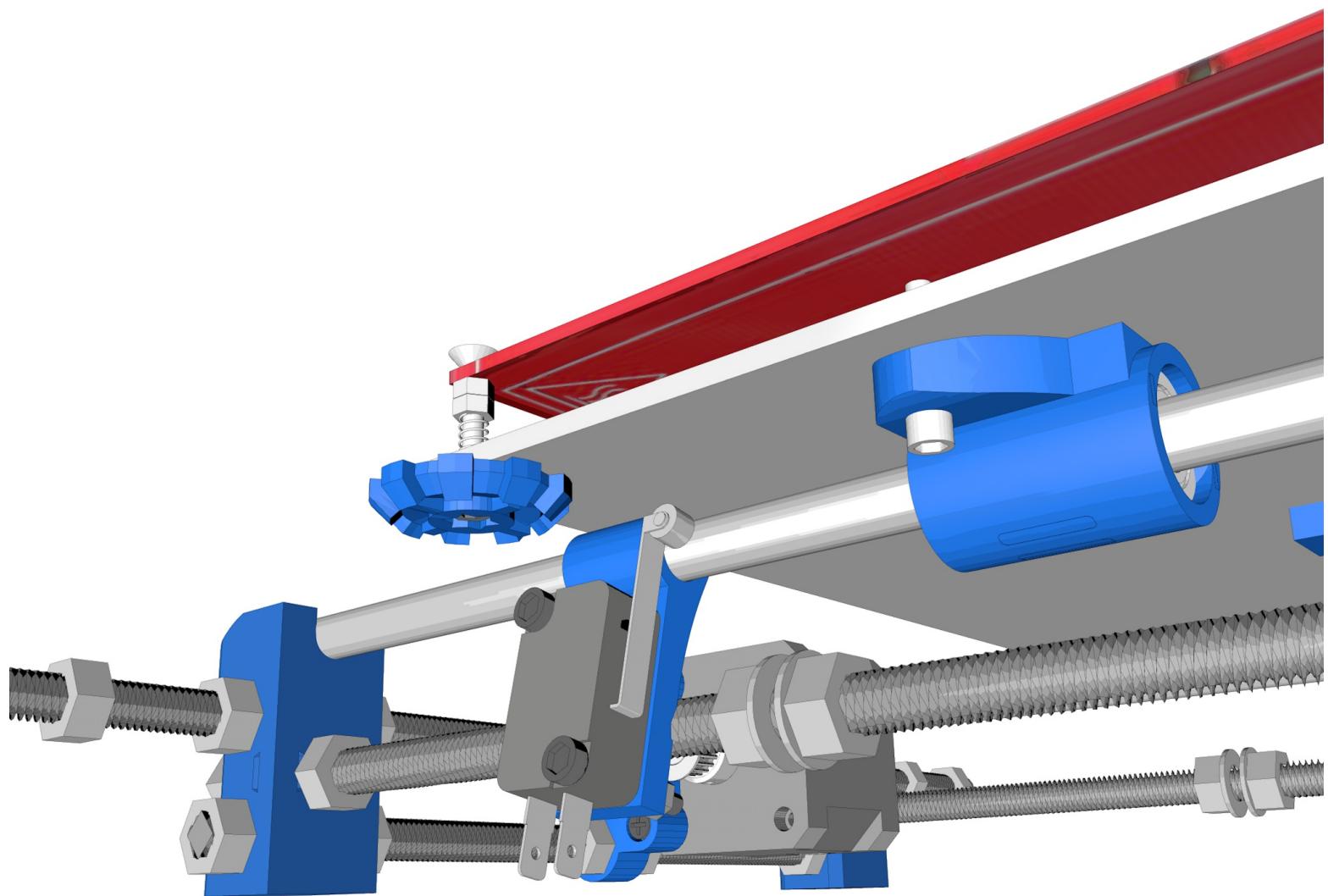


Fig 6.11 (Y endstop)

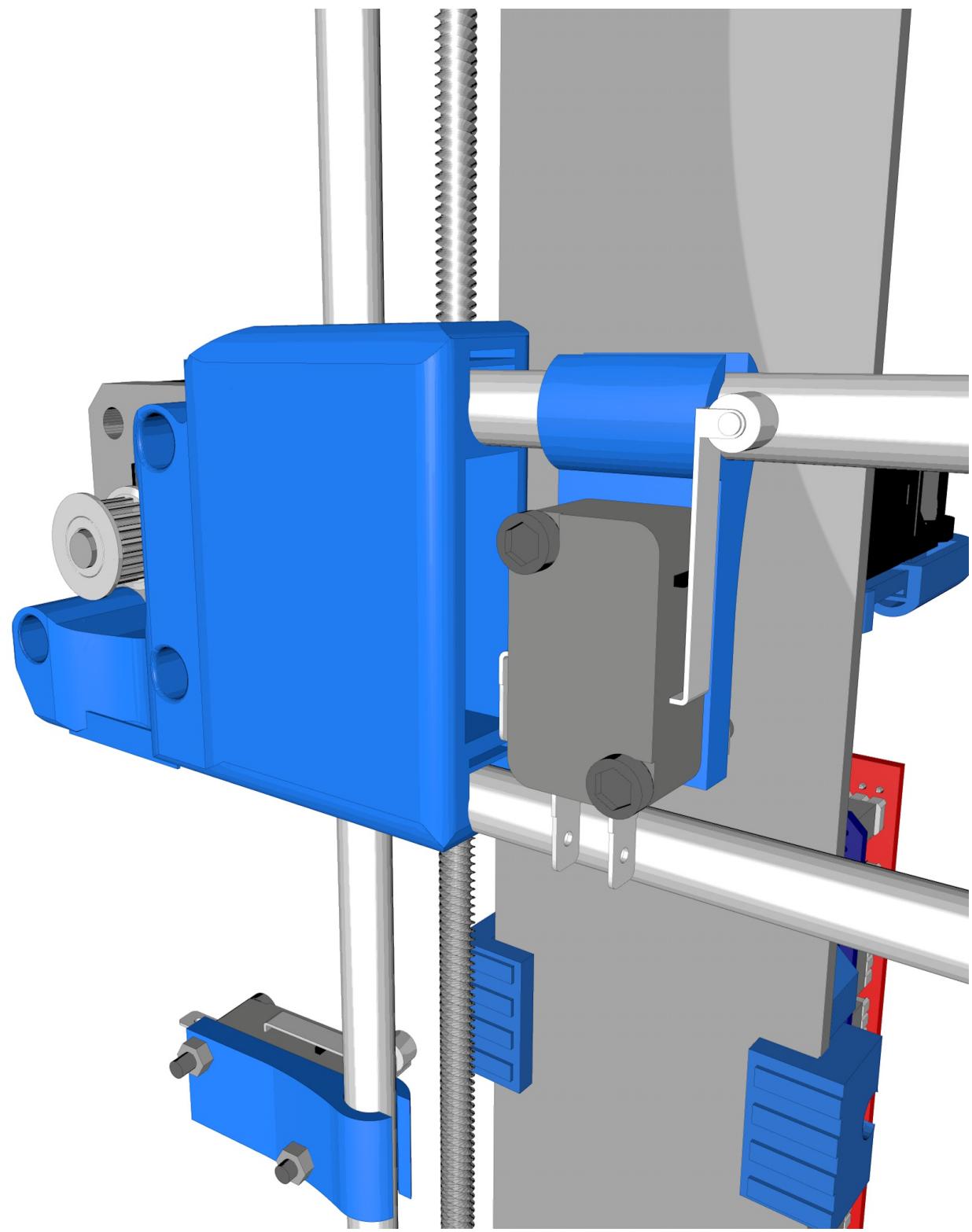
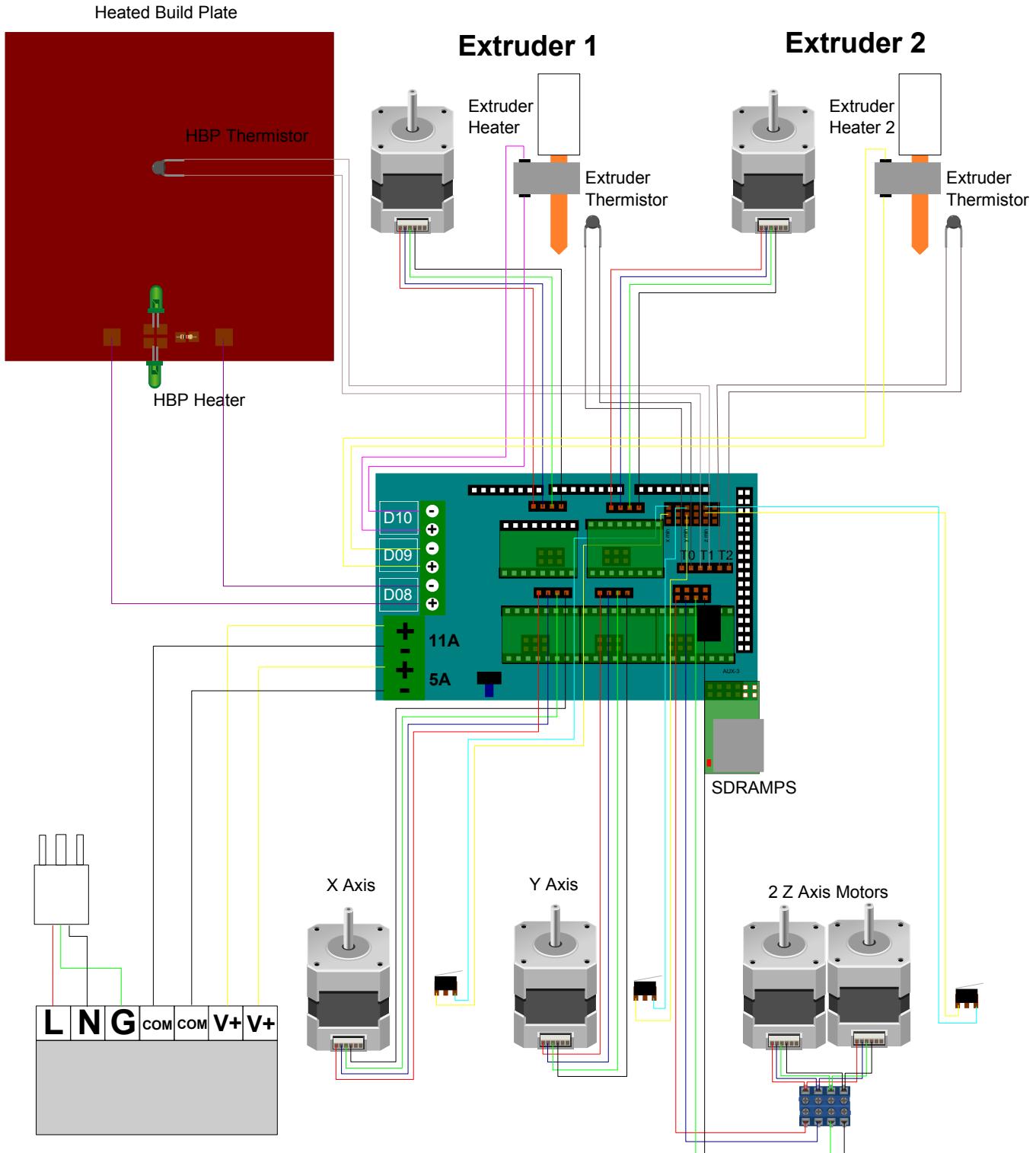


Fig 6.12 (X+Z endstops)

5: Wiring Diagram

RepRap Arduino Mega Pololu Shield 1.4



Power Supply

Created by Neil Underwood 5/28/2011