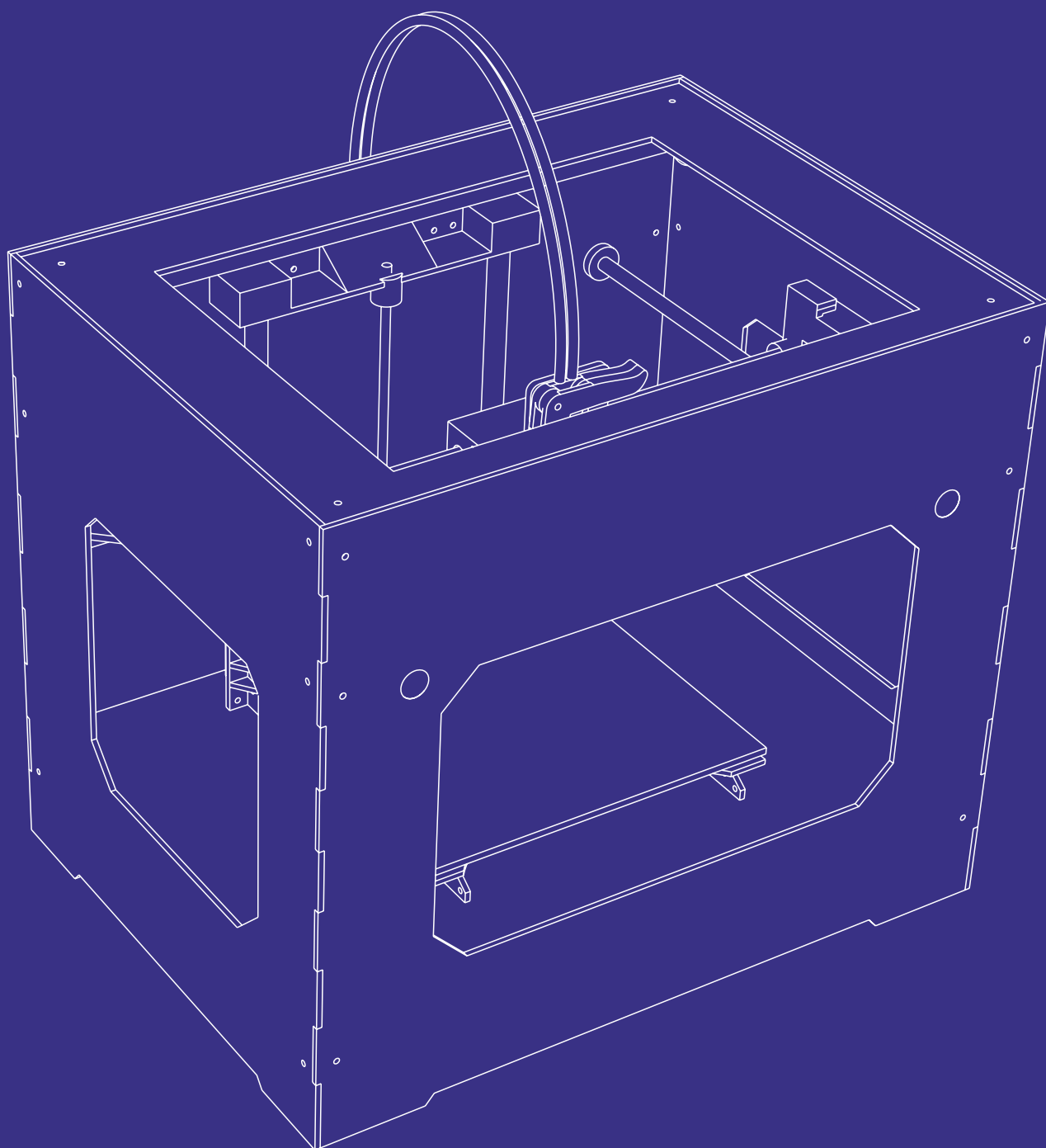# Idea Lab One

instrukcja montażu   build manual
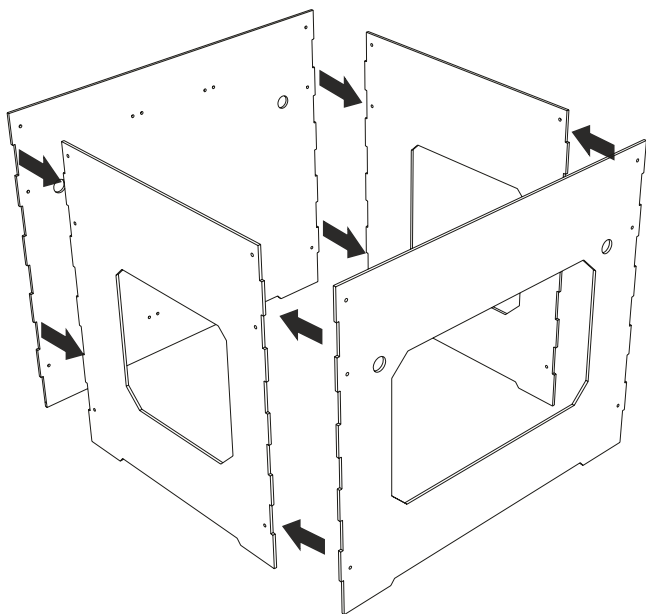
Bill of materials

-Cnc cutted dibond frame
-50x M3x8mm and 50 M3 nuts
-8mm smooth roods:
 - 1 x 404mm
 - 2 x 294mm
 - 2 x 284mm
- 2 x 12mm smooth roods 255mm
- set of printed plastic parts
- reprap electronics minimum 4 axis with all neded connectors
- 8 x LM8UU bearings
- 4 x LM12UU bearings
- table aluminium frame
- 24v power supply
- cables 4 wire and 2 wire
- 4 nema17 motors
- hotend jhead compatible
- spring 10mm outer diameter and 6mm outer diameter
- mk7 filament pulley
- 4 heating resisitors
- 200mm x150mm glass
- 3x mechanical endstop switch
- 1 x 100k thermistor
- HDT 3M timing belts 2 meters
- HDT 3M belt enclosed 282mm
- 2x m8 nut and 220mm of threaded rod m8

Before assembly check whole manual maybe You will find better way or better step organisation for assembly
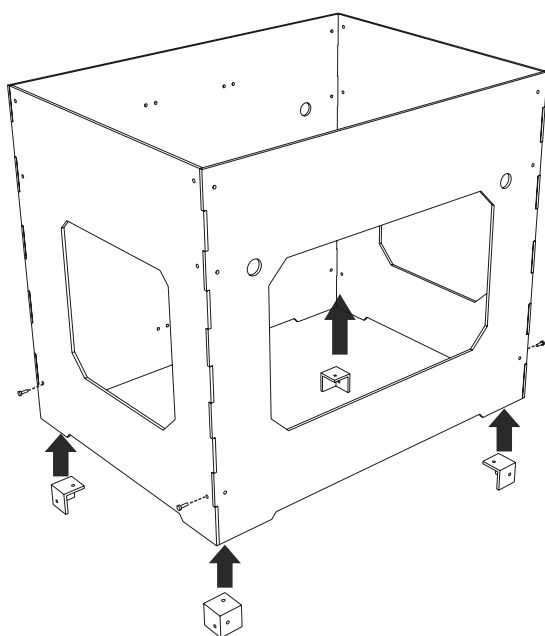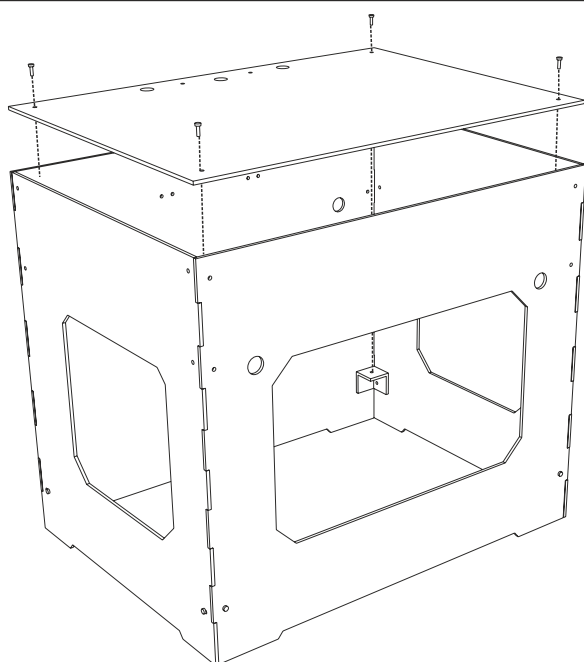
Step 1

Assembly sides of frame

Step 2

Use 8 M3 screws and assembly
4 bottom corners.
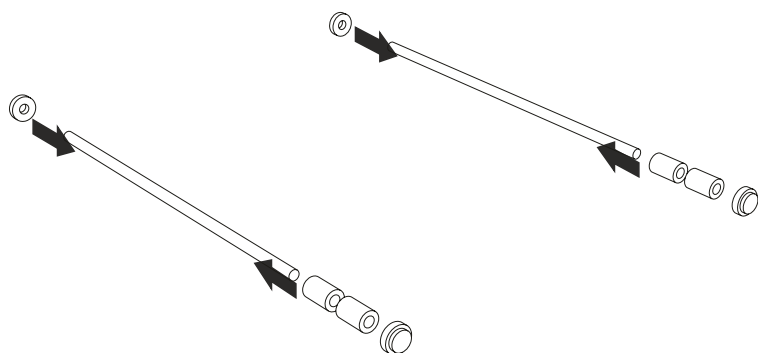Before mounting corners put M3
nuts into corners

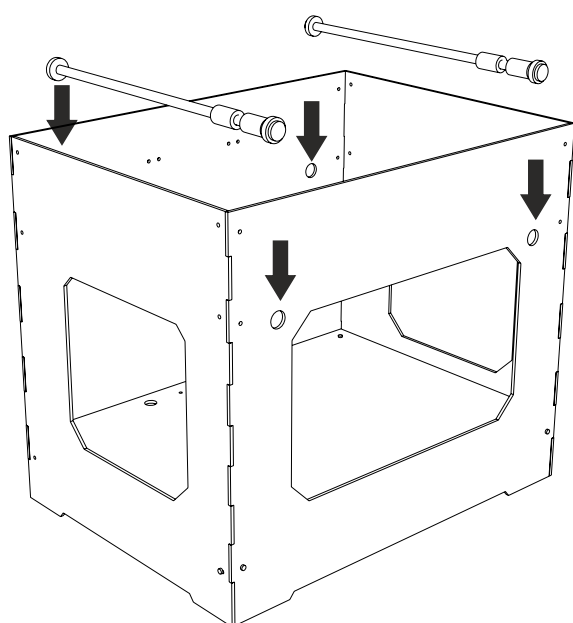## Step 3

Install bottom plate using 4 M3
screws

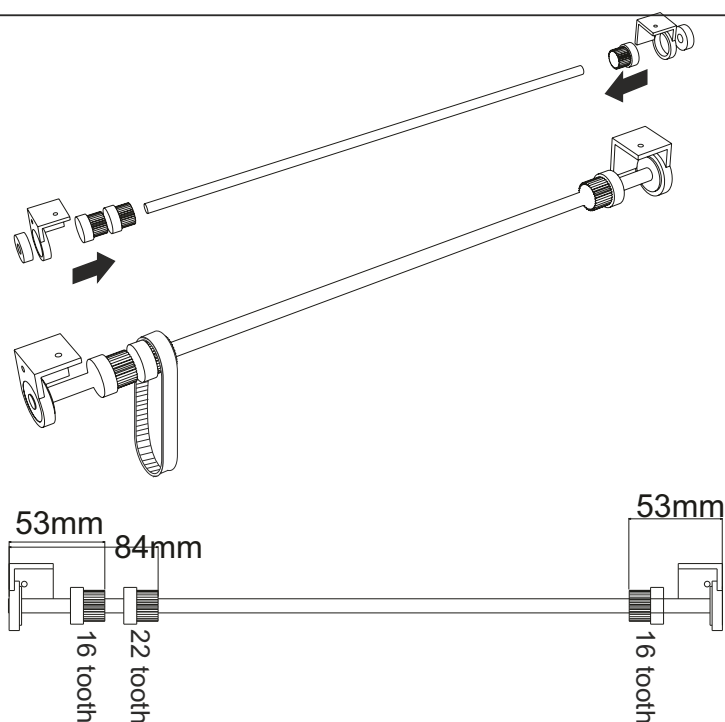Y axis assembly. Put 2 Lm08uu linear bearings on to smooth rod Y Put Y end caps onto rods.

Put Y axis rods into cap holes
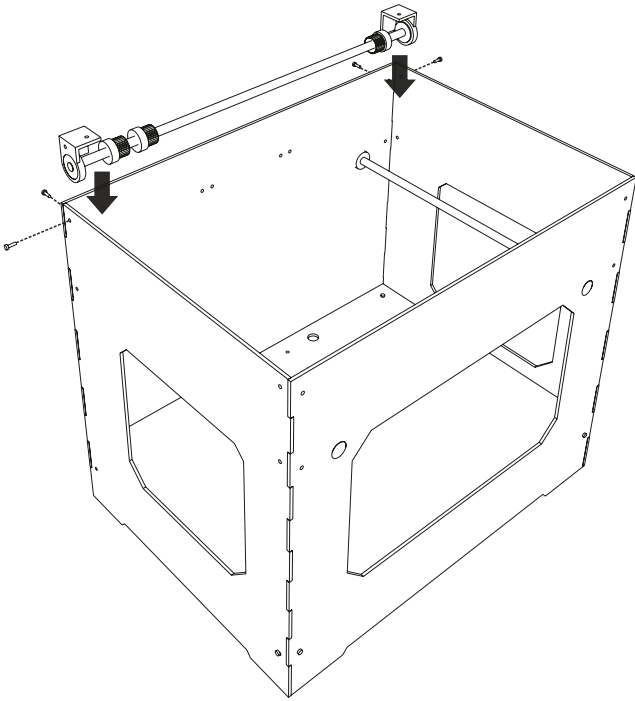
Put 22 tooth pulley into rod
Put 2x16tooth pulleys onto rod
Put 2 x 608ZZ bearing onto rods ends
Put 2 x y drive rod bracket onto rod
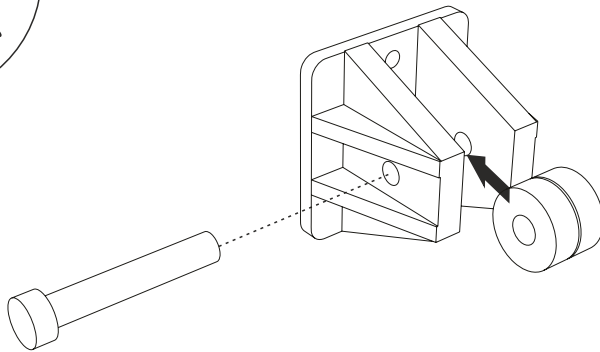Put short timing belt ont 22 tooth gear

53mm
84mm
53mm
16 tooth
22 tooth
16 tooth

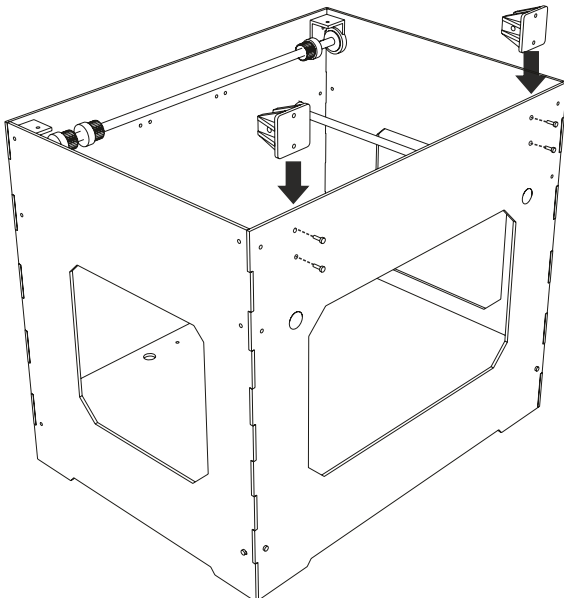Put Y axis drive rod into frame
and use 4 M3 screws to mount it

2x

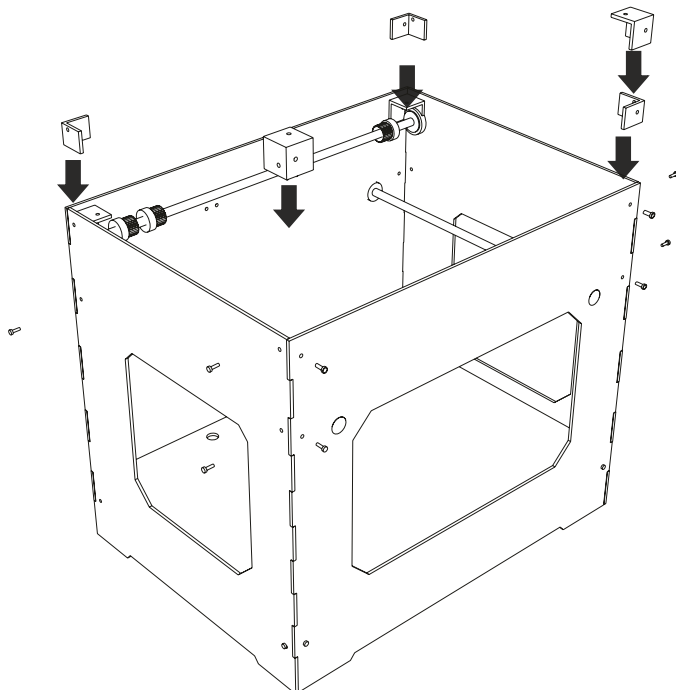Put 2 625ZZ bearing into Y bearing
holder and use M5 screw with nut
to mount it

Use 4 M3 screws with nuts to mount
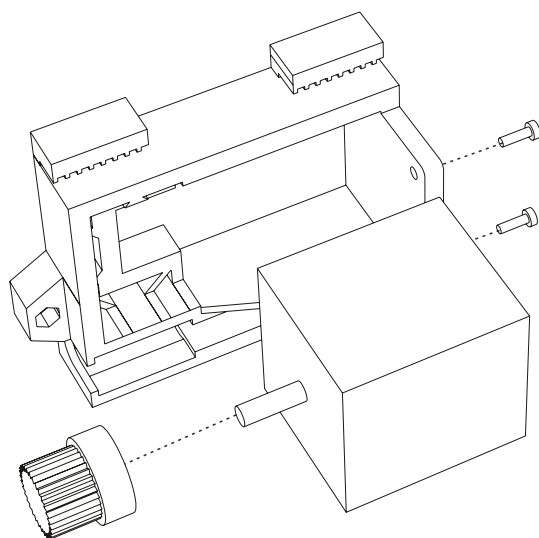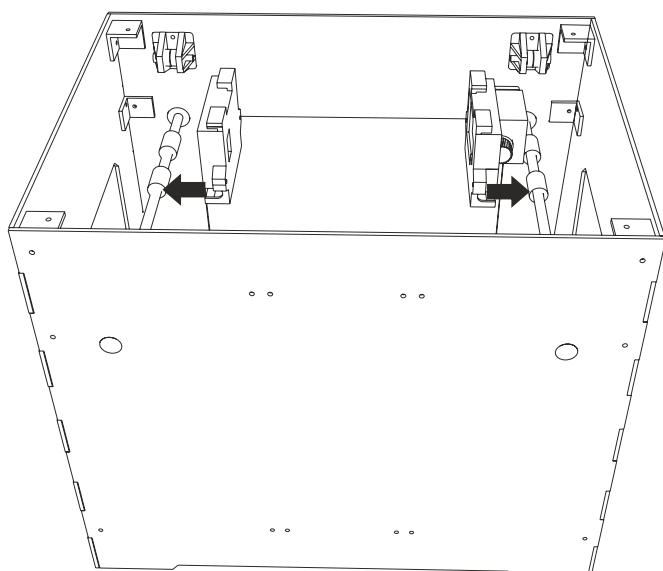Y bearing holders

Step 10

Put M3 nuts into all corners
and assembly middle corners and
front top corners with 12 M3 screws

Step 11

Put 14 tooth pulley onto motor
shift. Next ude 2 M3 screws to
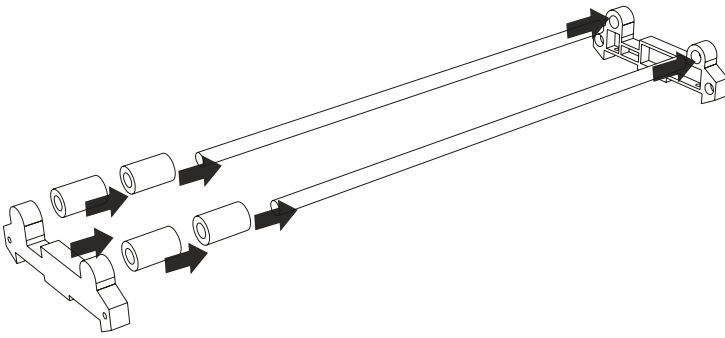assembly motor to x end

Step 12

Put x end's onto LM8UU bearings
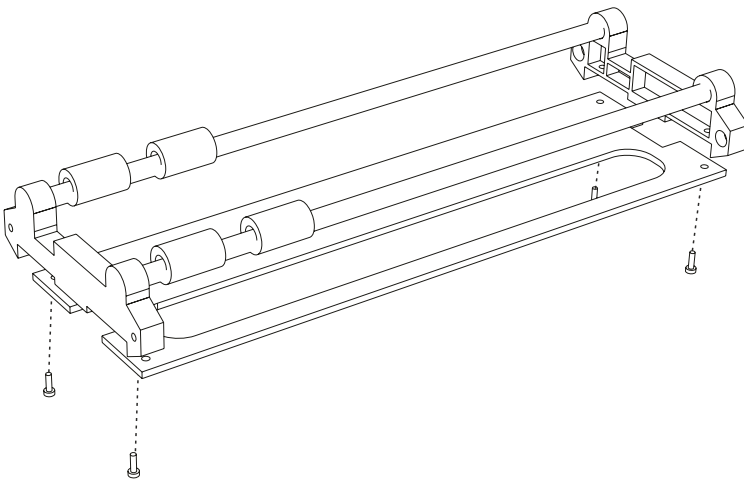When You looking from back
motor x end should be on the right

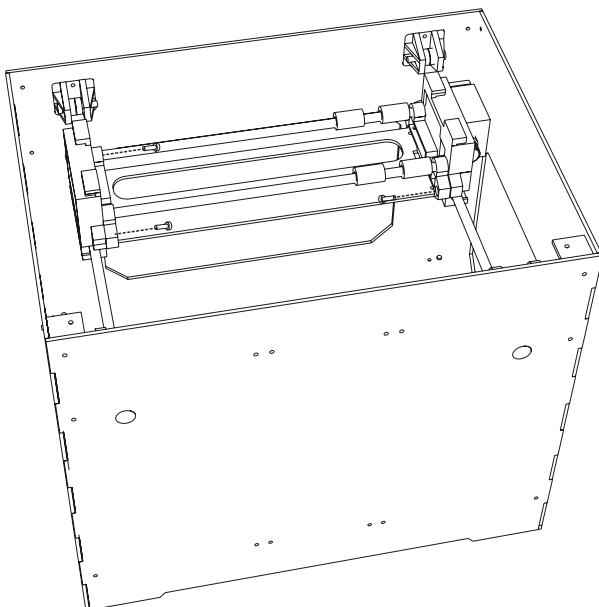Put 2 LM8UU bearings onto both x smooth roods and Insert them onto x axis smooth rods ends
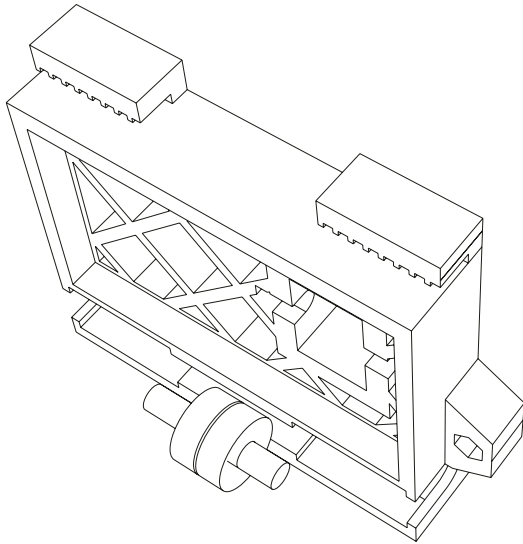
Use 4 M3 screws and nuts to assembly X plate

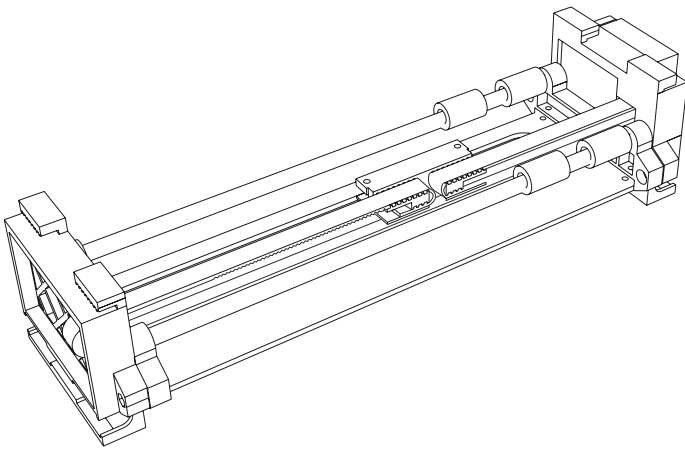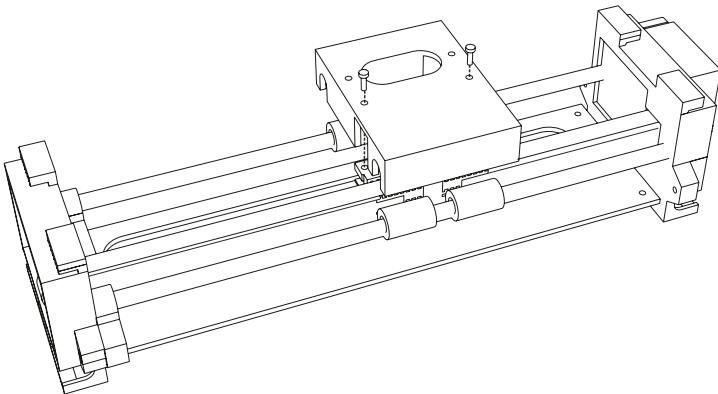Use 4 M3 screws to mount x axis to X-ends. Place M3 nuts into x ends

Step 16

Put M3 nuts into all corners
and assembly middle corners and
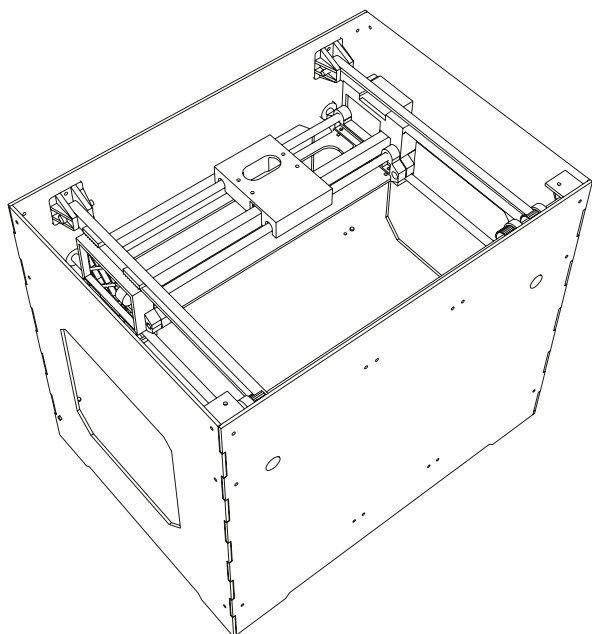front top corners with 12 M3 screws

Step 17

Take X timing belt put it onto X timing
pulleythrought hole over the x end
and put into X tensioner.
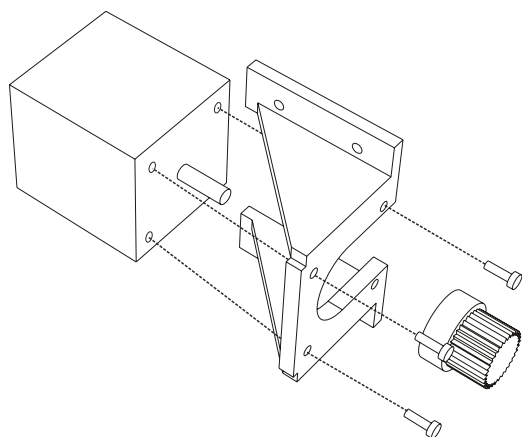Check reference photos at the end

Step 18

Put X carriage onto X LM8UU
bearings and use 2 M3 screws to
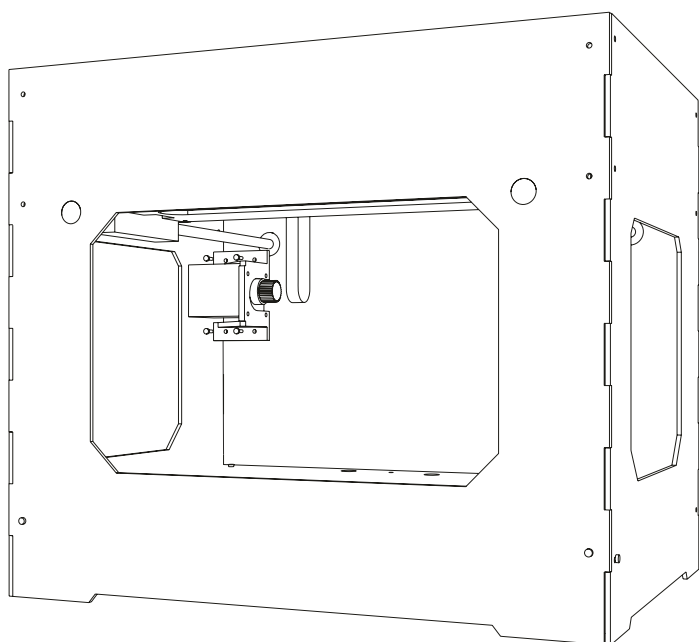connect it with x tensioner

Move x axis to front position
Hook up y timing belt in the front
x ends tensioners. Put belt throught
front bearing next to 16 tooth timing
pulleys and at the end put them
into back x-ends tensioners.
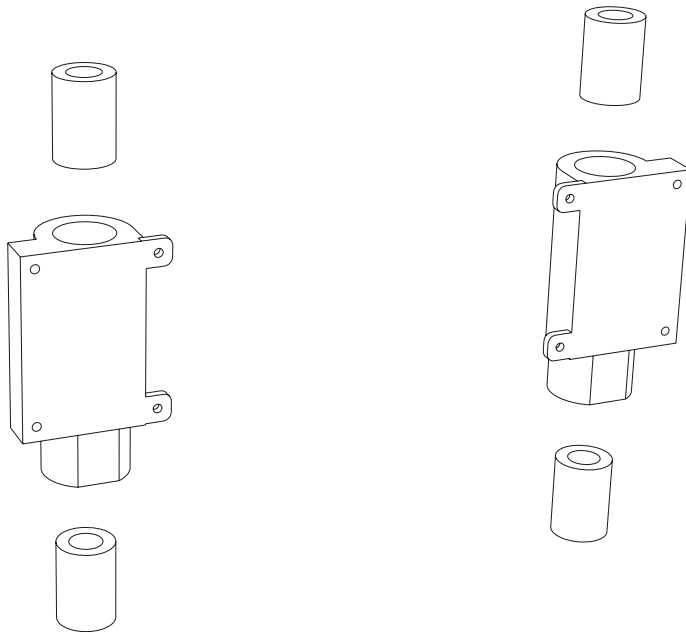Timing belt must be appropriately
tensioned

Put 14 tooth pulley onto motor
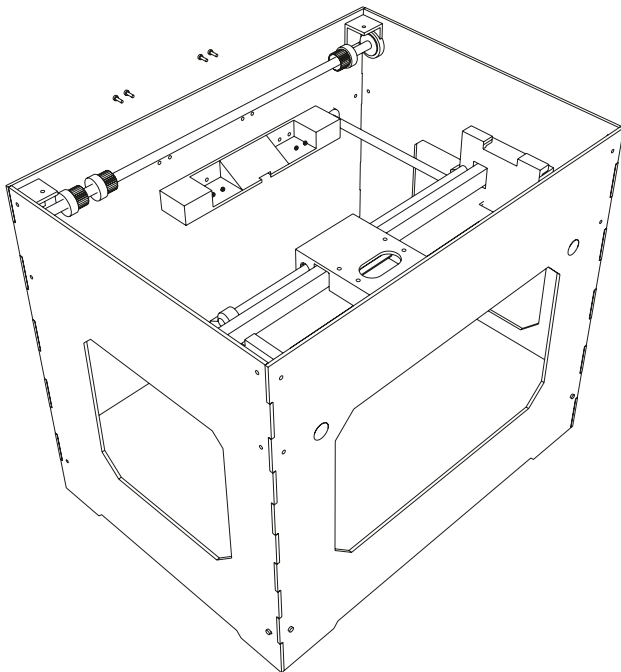shift. Next use 2 M3 screws to
assembly motor to x end

Mount Y motor to frame using
4 M3 screws and nuts. Put timing
belt onto pulley before assembly

Put 4 LM12UU bearings
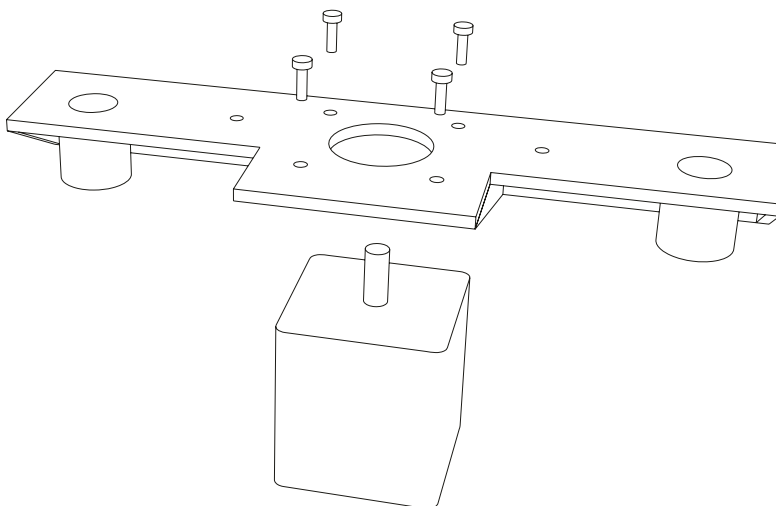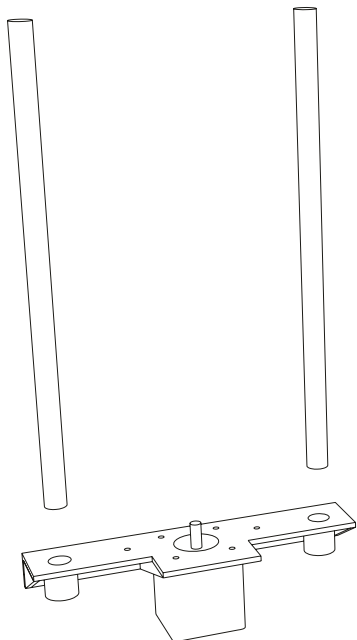into Z bearings holders

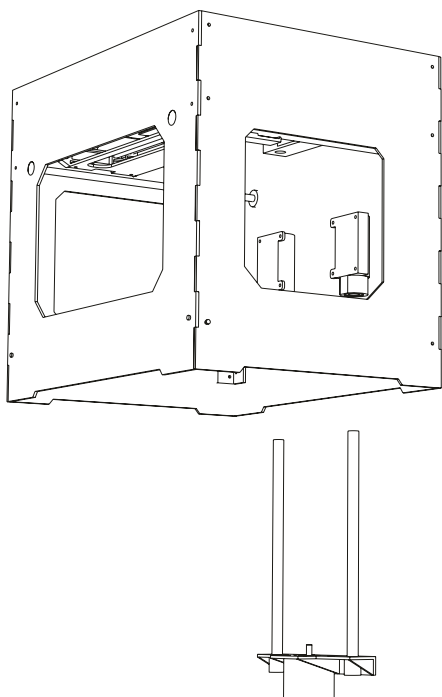Use 4 M3 screws to
assembly z-upper part

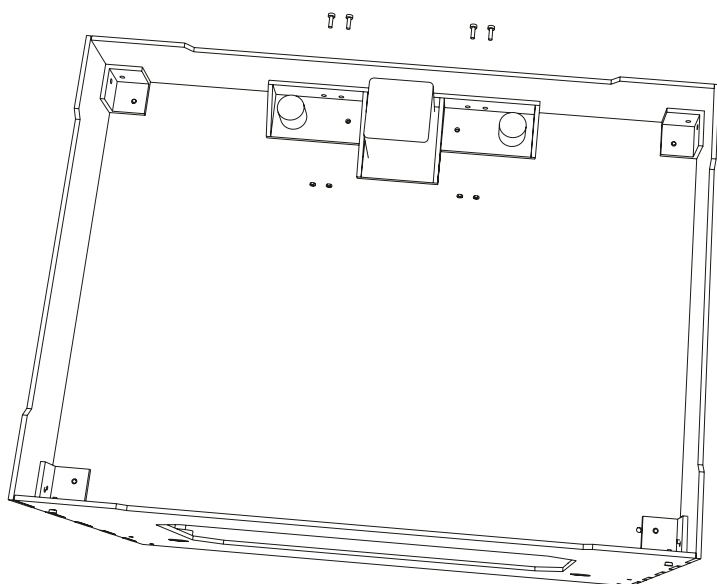Mount Z motor to z-bottom using
4 M3 screws.

Step 25

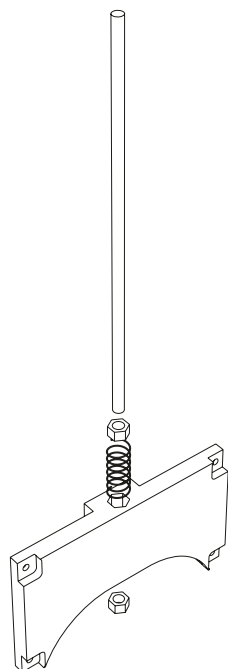Put 2 12mm smooth rods into z-lower part

Step 26

Put Z lower with smooth rods into frame from bottom. Put z bearing holders onto rods and put all to z-upper part
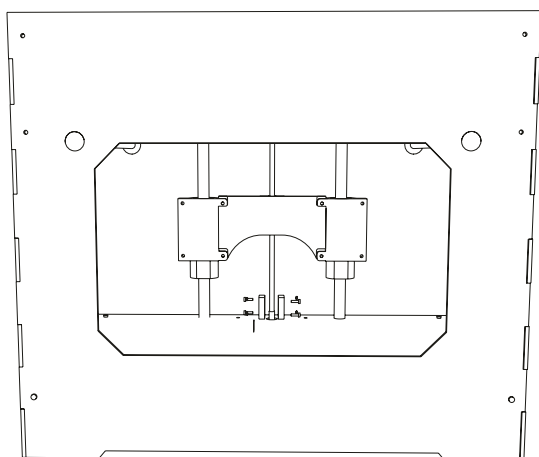
Step 27

Mount z-bottom to frame using 6 M3 screws and nuts.

Step 28

Assembly Z middle using Z theraded rod put first spring from top next put m8 nut put threaded rod and use next m8 nut from bottom

Step 29

Assembly Z middle using Z theraded rod put first spring from top next put m8 nut put threaded rod and use next m8 nut from bottom
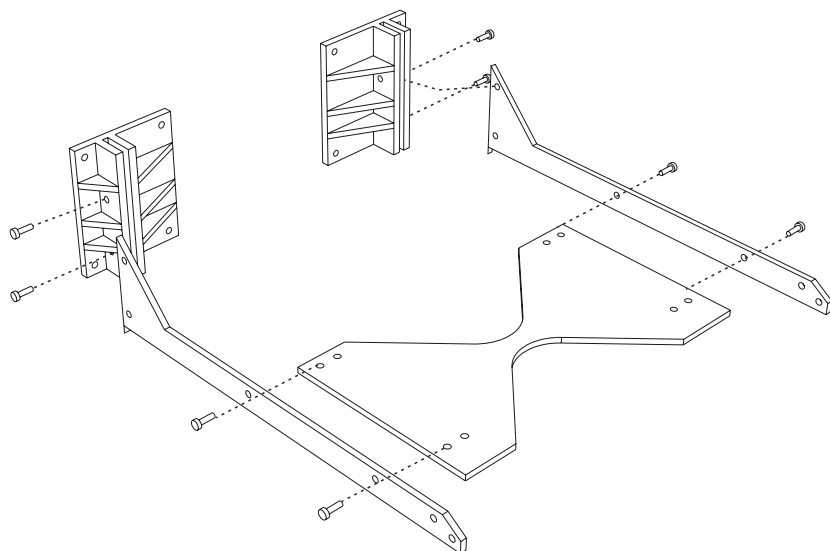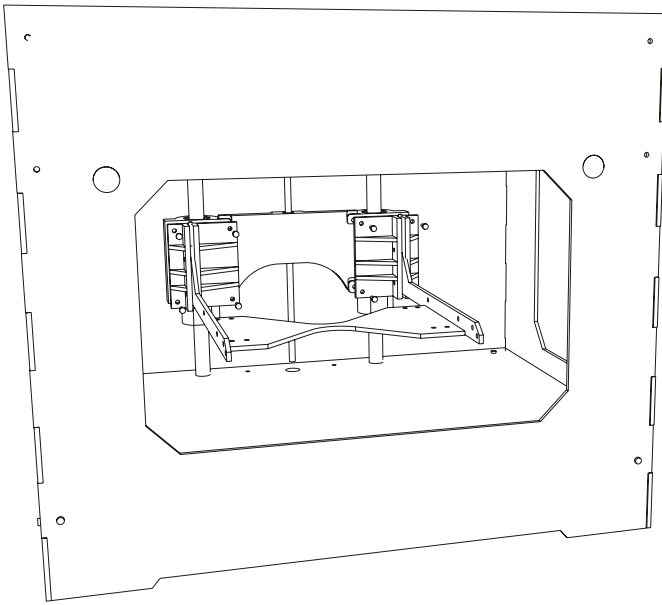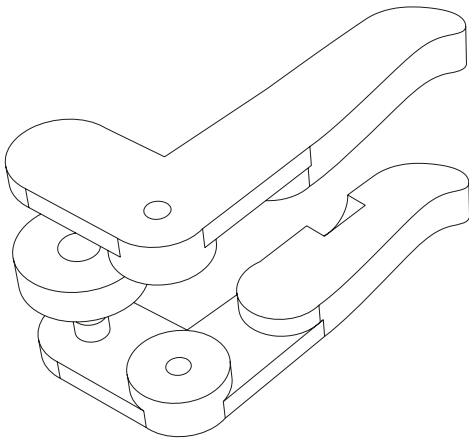
Step 30

Table frame assembly use 4 m3 screws to assembly aluminim parts. Put the frame onto z holders and use next 4 m3 screws with nuts

Use 8 m3 screws to assembly table frame to z bearings holders and z middle part

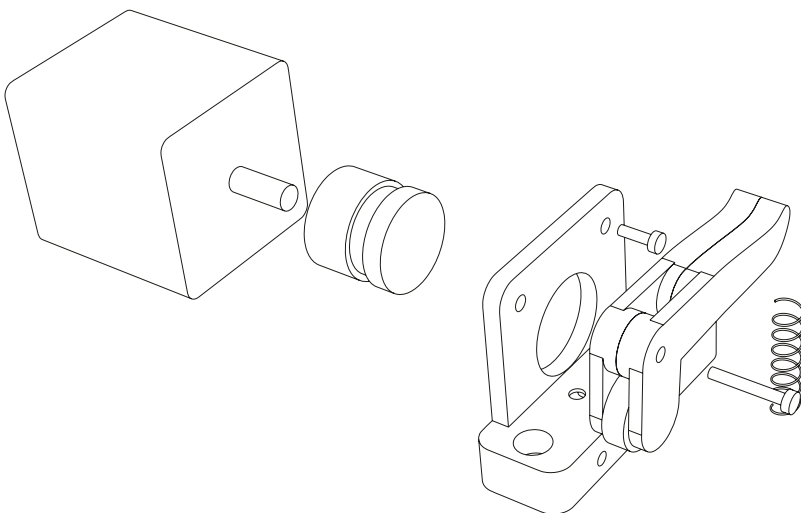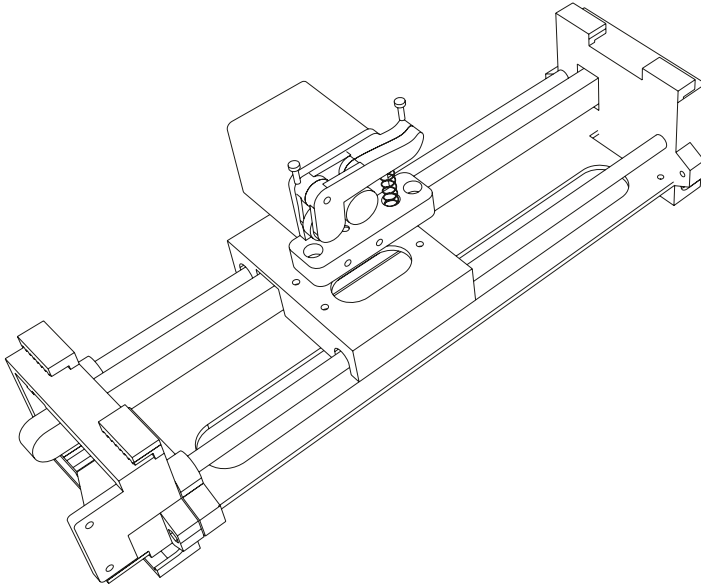Use a super glue to assembly extruder pusher. Before glueing put 625ZZ bearing

Table frame assembly use 4 m3 screws to assembly aluminim parts. Put the frame onto z holders and use next 4 m3 screws with nuts

Mount Y motor to frame using
4 M3 screws and nuts. Put timing
belt onto pulley before assembly