

Milestone 2

Building Instructions

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Anthony Caffaro

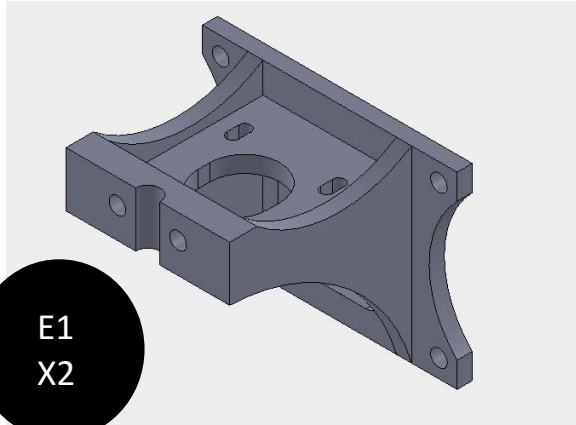
Aimee Lam

Ava Mistry

Patrick Stevenson

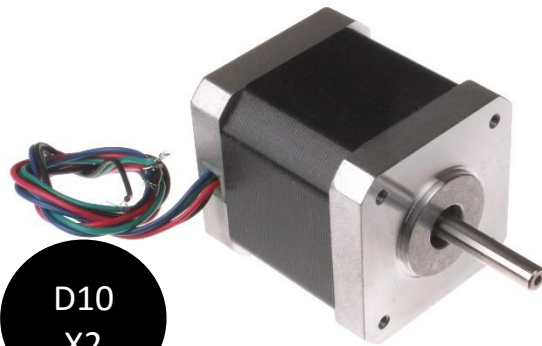
Rachelle Walter

Y Axis Motor Mount (both sides): Parts



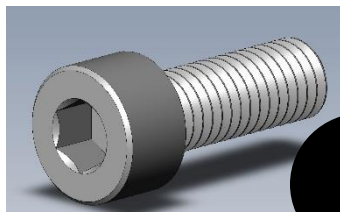
E1
X2

Lower Z motor mount



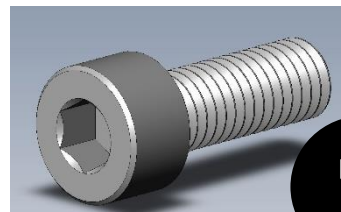
D10
X2

Nema 17 Stepper Motor



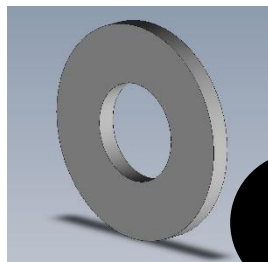
A7
X8

M5 X 14mm bolt



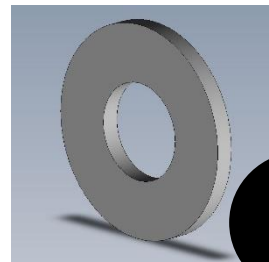
D20
X8

M3 X 10mm bolt



A5
X8

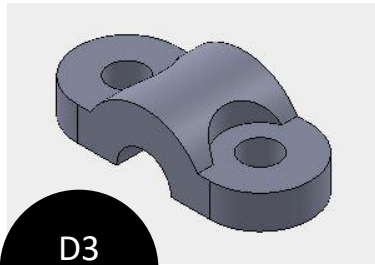
M5 washer



D21
X8

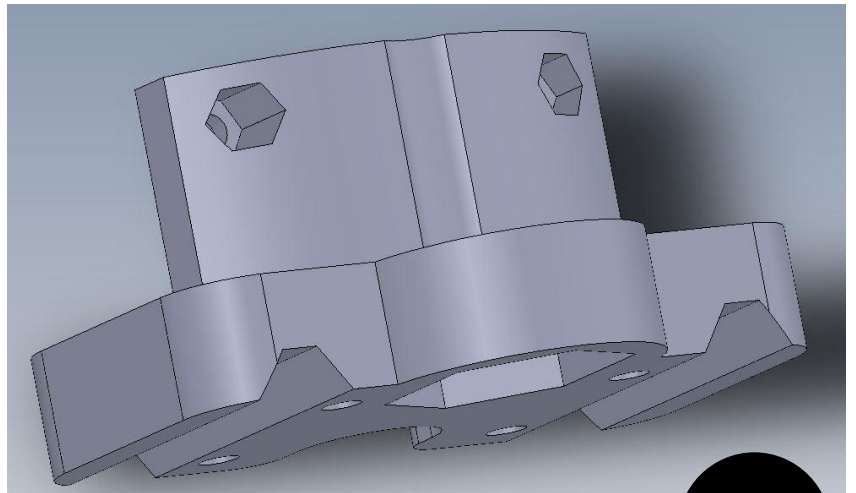
M3 Washer

Y Rods and clamp for z axis (Non-motor side): Parts



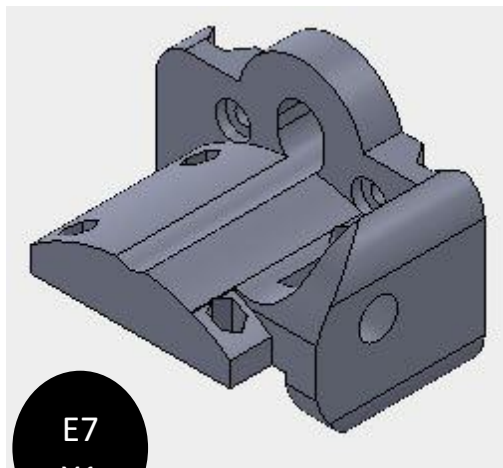
D3
X2

Z rod clamp



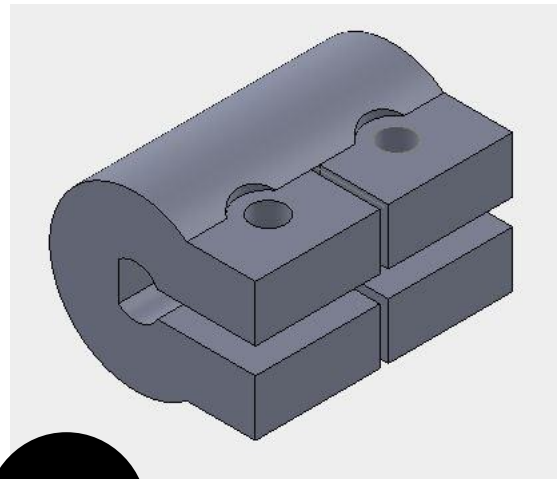
Z Axis lower mount Clamp

E5
X1



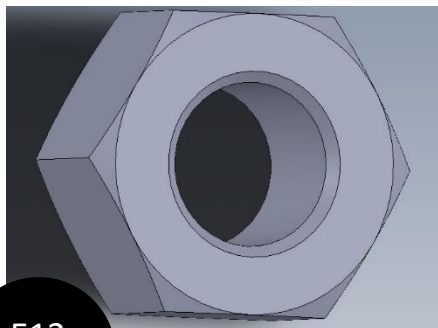
E7
X1

Z axis upper mount idle



E2
X1

Beefy Coupler



E13
X1

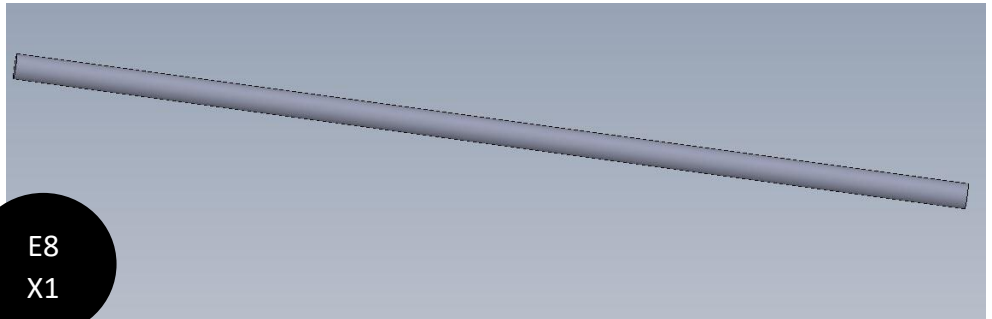
Acme Nut

Y Rods and clamp for z axis (Non-motor side): Parts Contd.



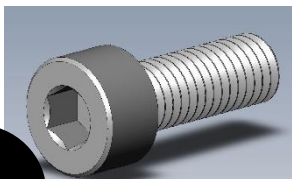
E9
X1

Threaded Rod



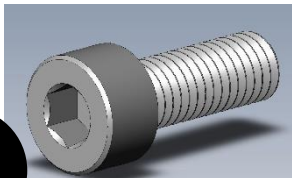
E8
X1

Z steel Rod



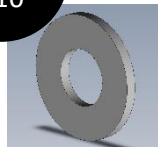
E3
X4

M3 X 20mm



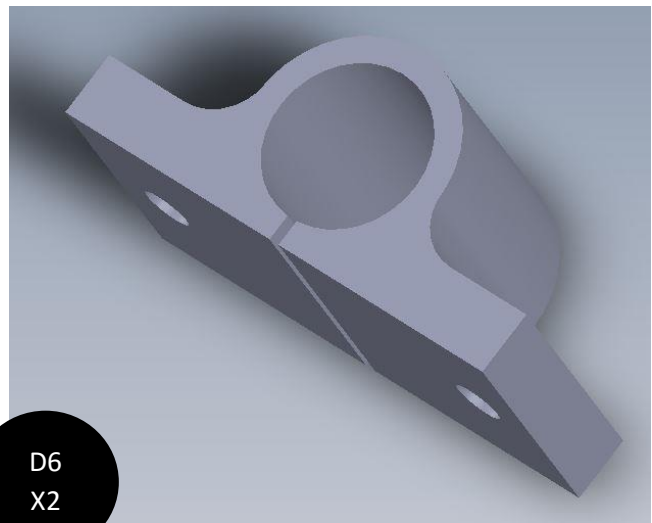
E10
X6

M3 X 16 mm



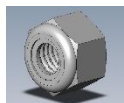
D21
X10

M3 Washer



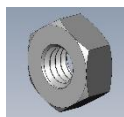
D6
X2

LM8UU Bearing Holder



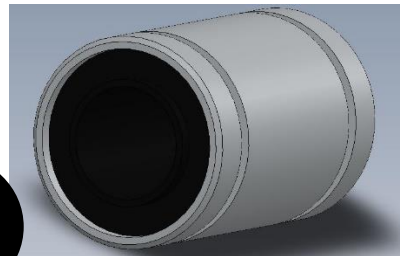
E4
X6

M3 Lock Nut



E11
X4

M3 Nut

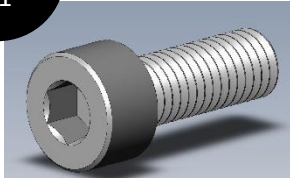


D7
X2

LM8UU Bearing

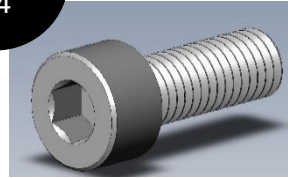
Y Rods and clamp for z axis (Non-motor side): Parts Contd.

D15
X1



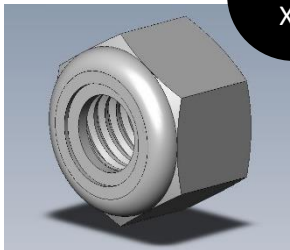
M8 X 30 mm Bolt

A7
X4



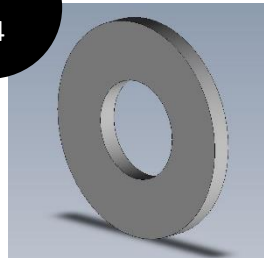
M5 X 14 mm Bolt

D16
X1



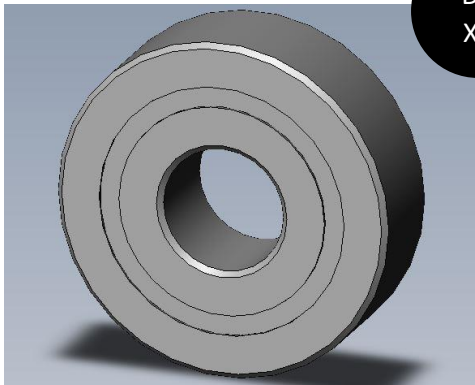
M8 Locknut

A5
X4



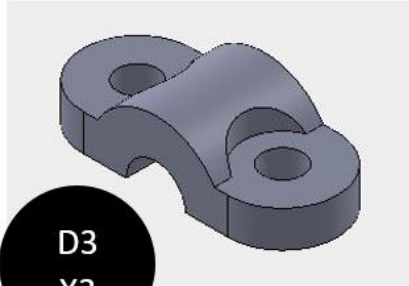
M5 Washer

D8
X2



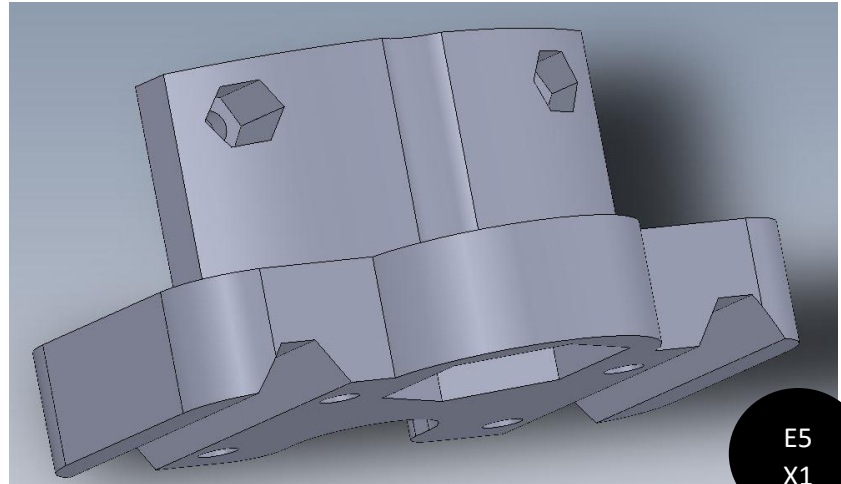
6082Z Bearing

Y Rods and clamp for Z axis (Motor side): Parts



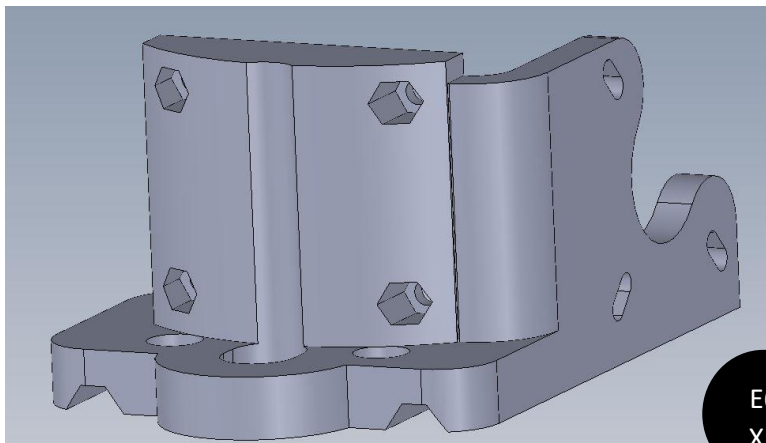
D3
X2

Z clamp



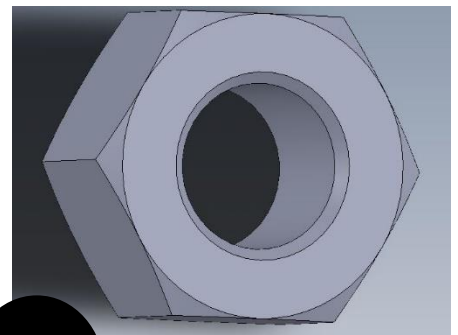
E5
X1

Z axis lower mount clamp



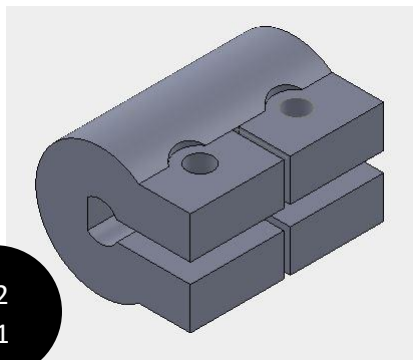
E6
X1

Upper Z motor mount



E13
X1

3/8-12 Acme Nut



E2
X1

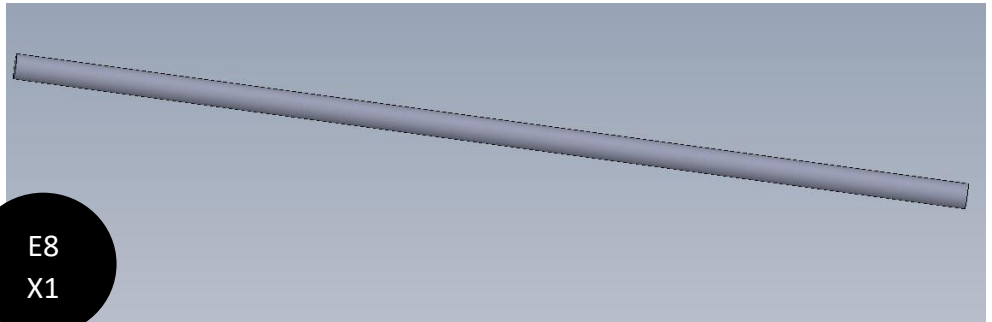
Beefy Coupler

Y Rods and clamp for z axis (motor side): Parts Contd.



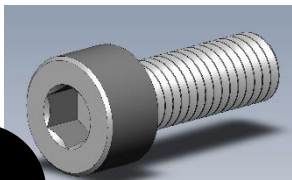
E9
X1

Threaded Rod



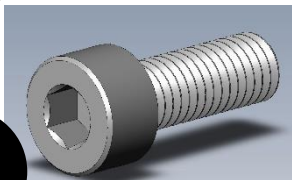
E8
X1

Z steel Rod



E3
X6

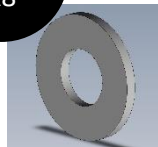
M3 X 20mm



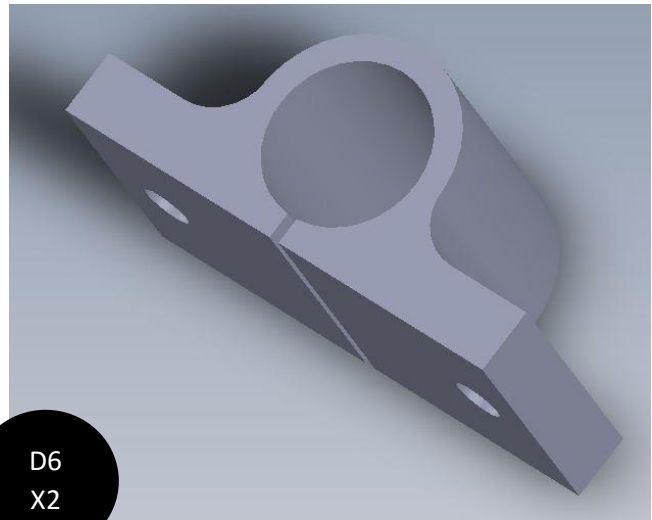
E10
X6

M3 X 16 mm

D21
X8

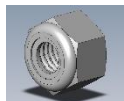


M3 Washer



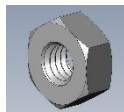
D6
X2

LM8UU Bearing Holder



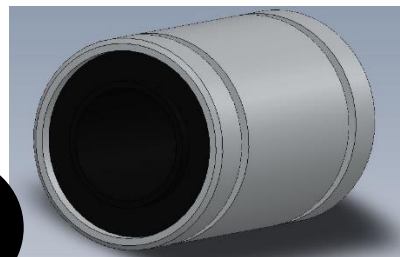
E4
X6

M3 Lock Nut



E11
X6

M3 Nut

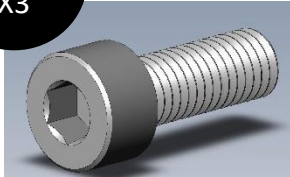


D7
X2

LM8UU Bearing

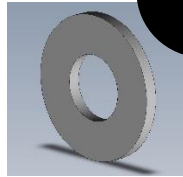
Y Rods and clamp for z axis (motor side): Parts Contd.

D20
X3



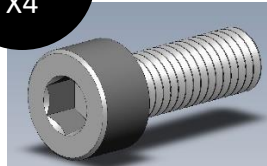
M3 X 10mm

D21
X3



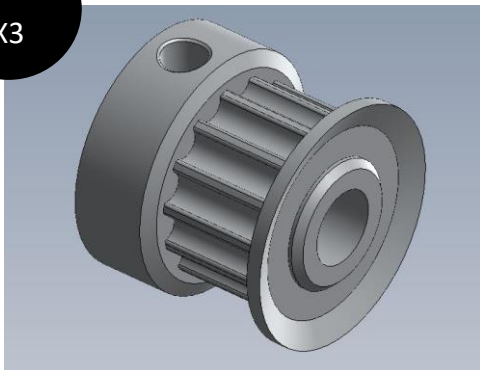
M3 Washer

A7
X4



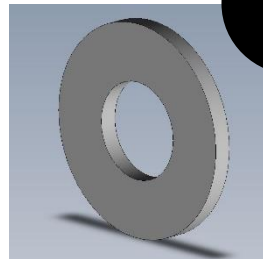
M5 X 14mm Bolt

D11
X3



T5 Pulley

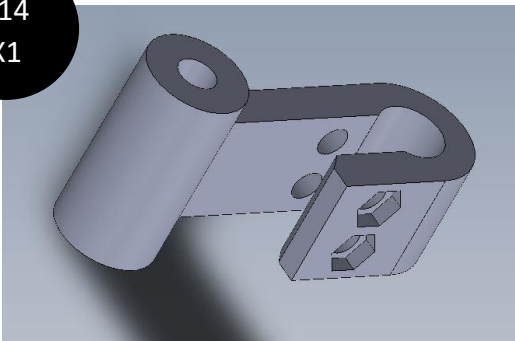
A5
X4



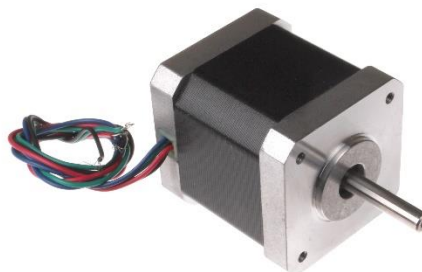
M5 Washer

D10
X1

E14
X1

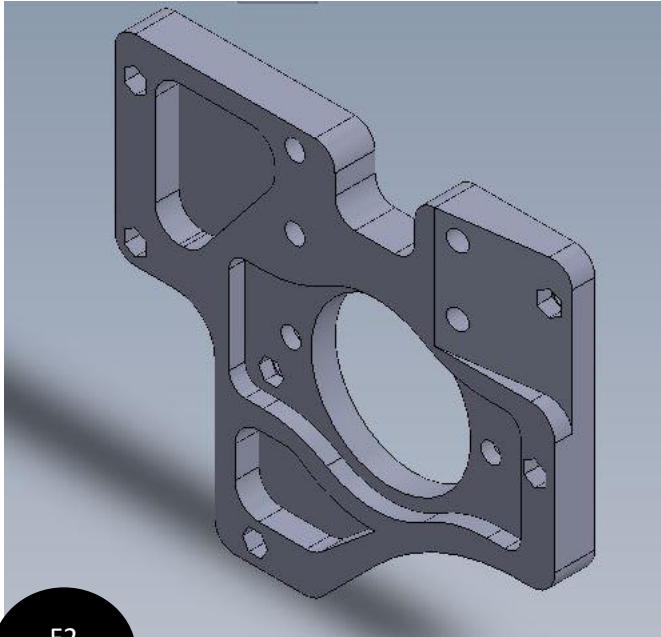


Z emergency stop



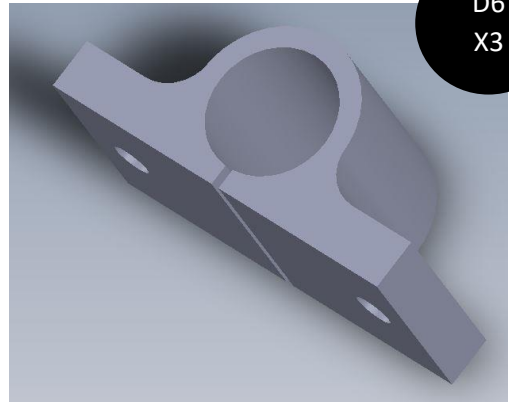
Nema 17 Stepper motor

Z axis and X carriage: Parts



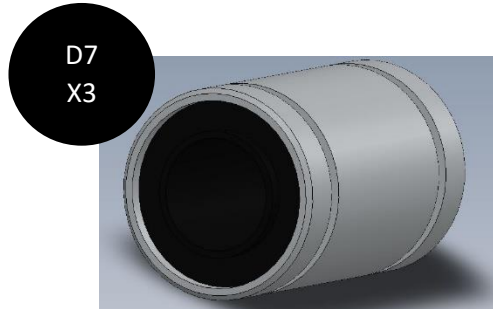
F2
X1

Printer Head Stage



D6
X3

LM8UU Bearing Holder

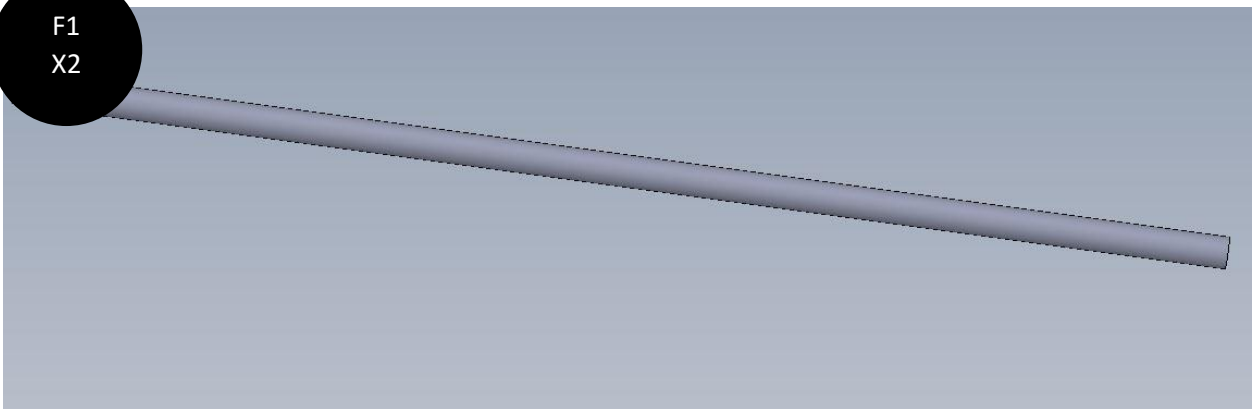


D7
X3

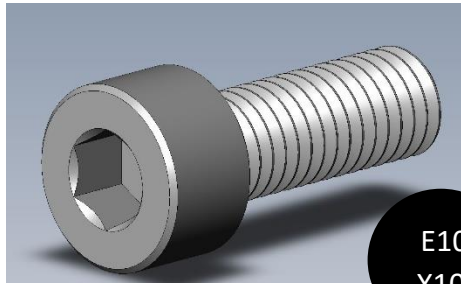
LM8UU Bearing

5/16" drill Rod 36"

F1
X2

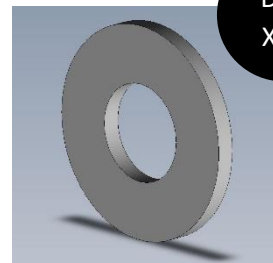


Z axis and X carriage: Parts Contd.



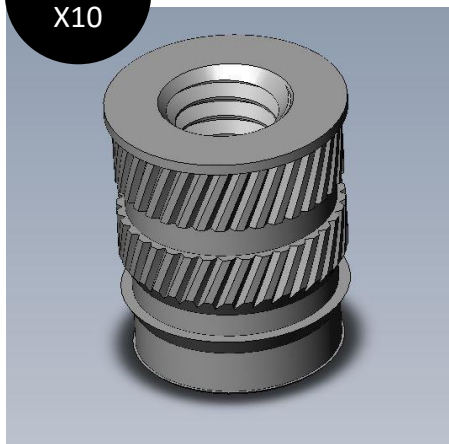
M3 X 16mm Bolt

E10
X10



D21
X10

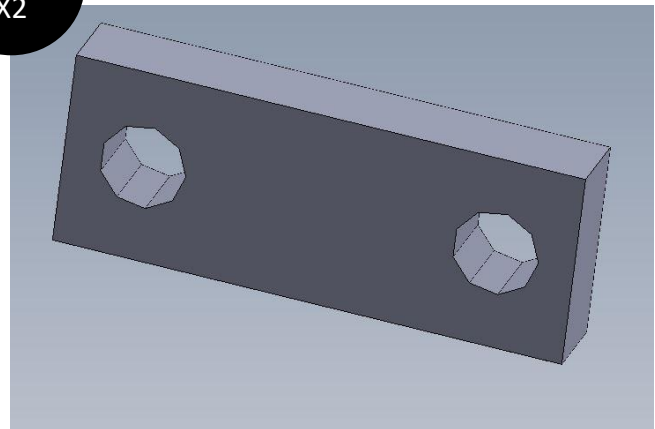
M3 Washer



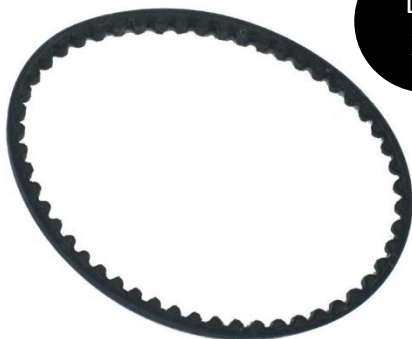
F3
X10

A333

D14
X2



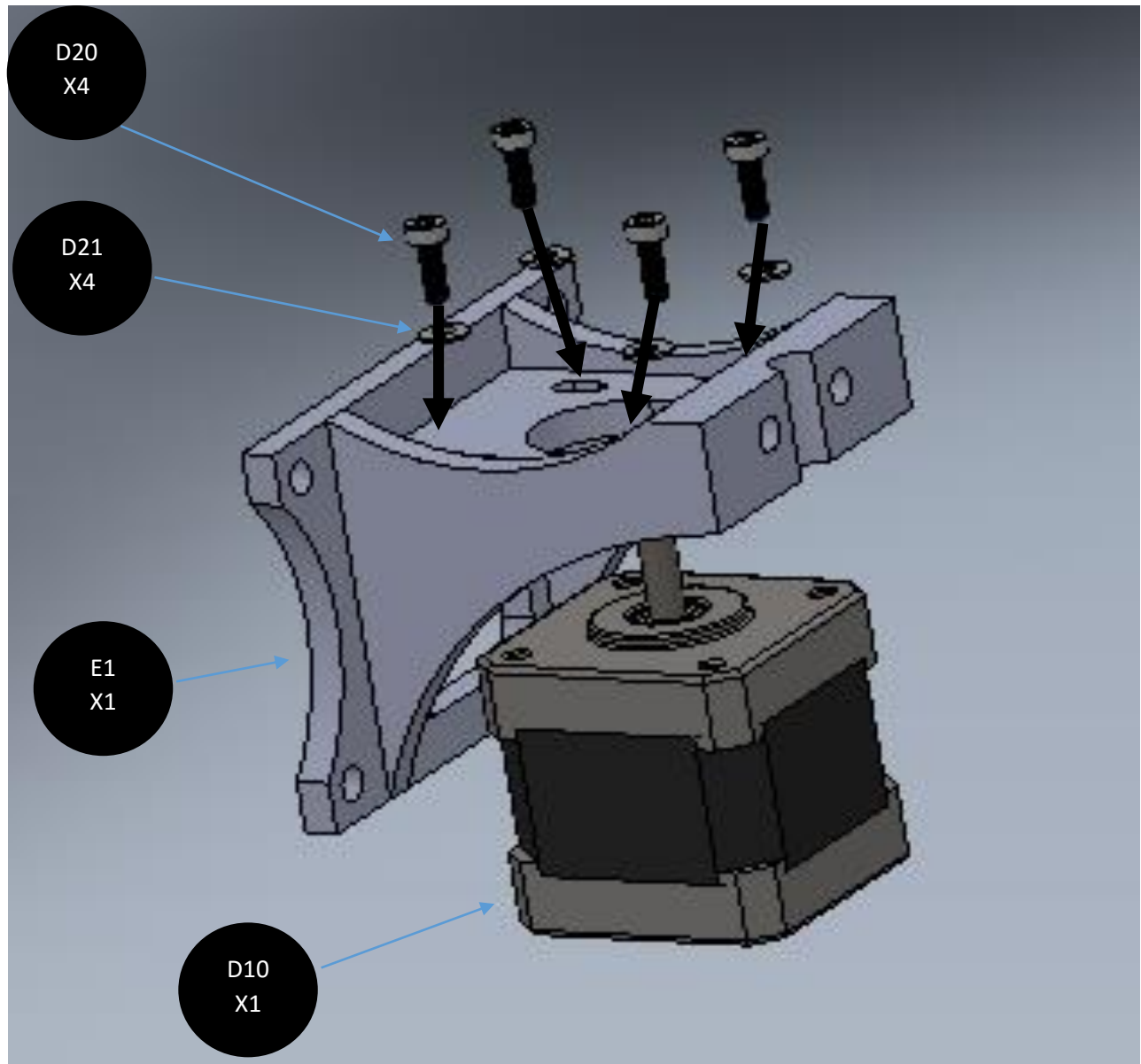
Y Belt Clamp



D12
X1

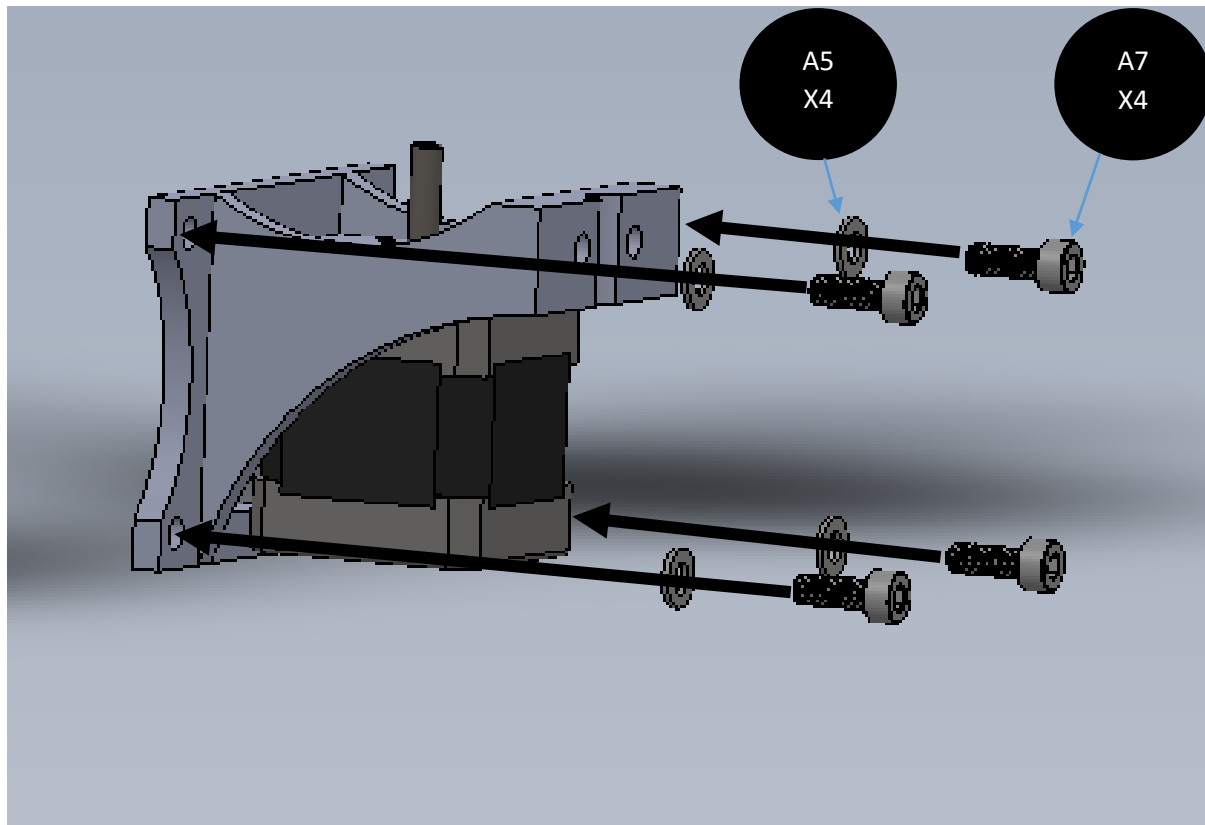
Belt

A - Y Axis Motor Mount Assembly



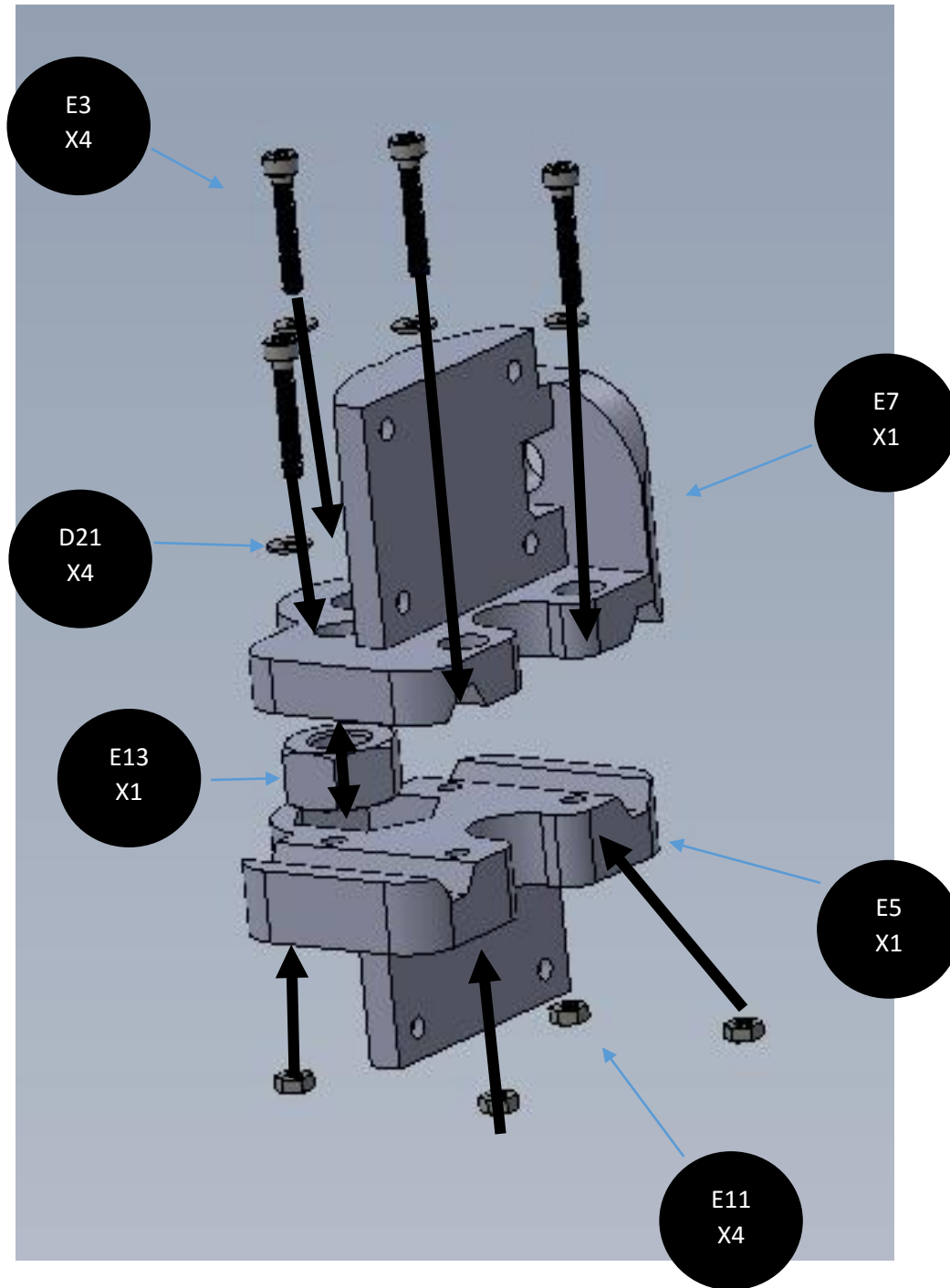
Attach motor (D10) to motor mount using four M3 X 10mm (D20) bolts and four washers (D21)

B – Y Axis motor mount Assembly



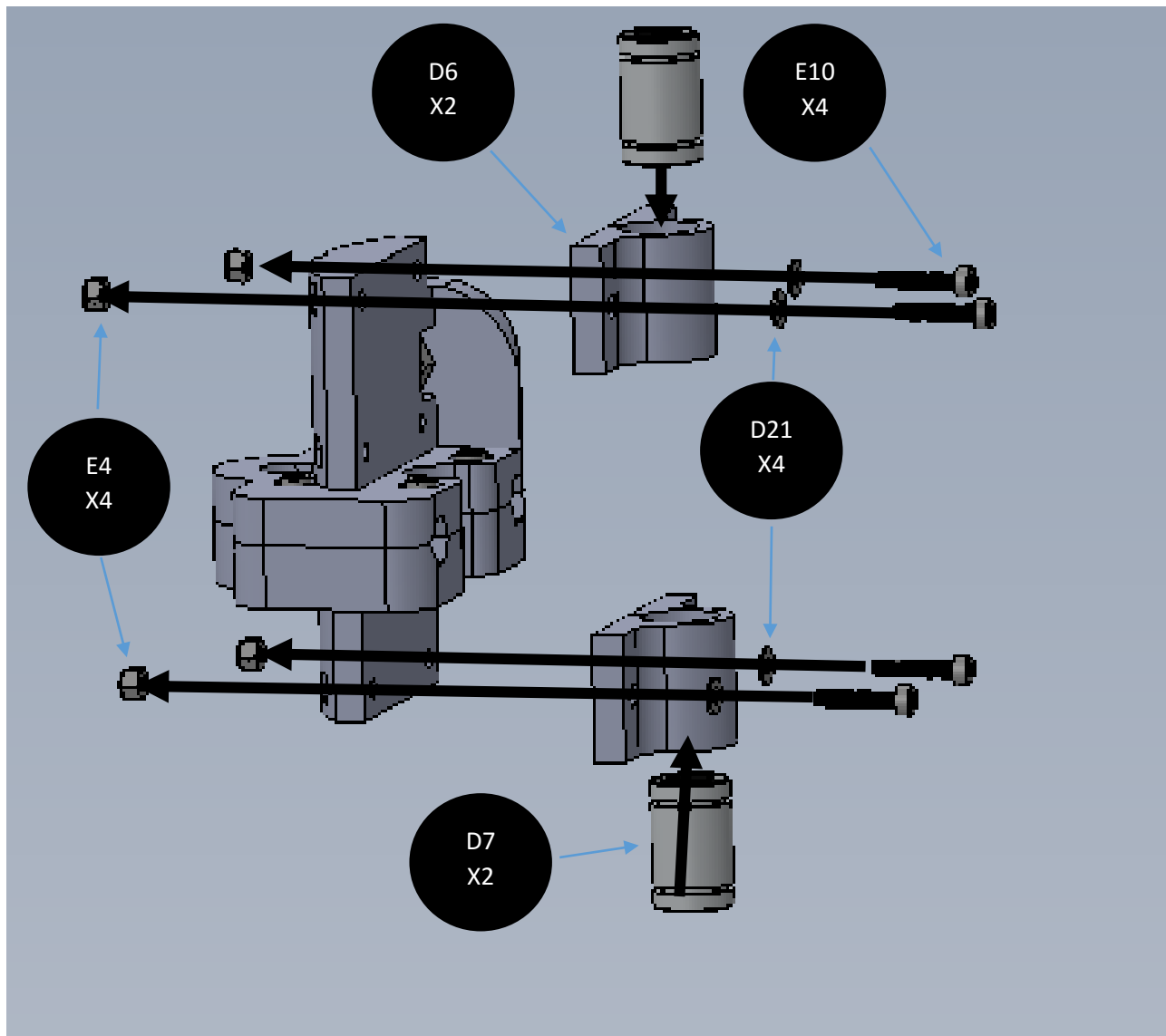
Attach motor mount and motor to the frame assembly using four M5 X 14mm (A7) bolts and four M5 washers (A5)

C – No motor X End Clamp Assembly



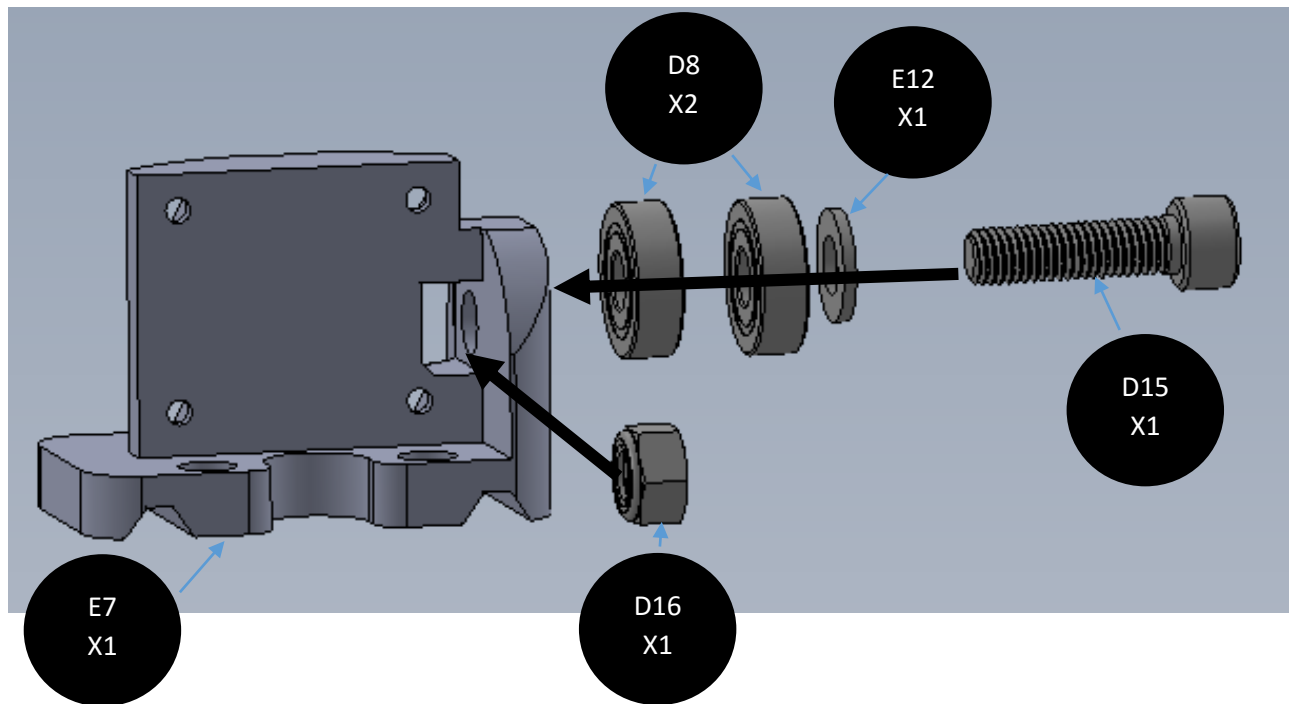
Attach (E5) to (E7) using four M3 X 20 mm (E3) bolts four M3 washer (D21) and four M3 nuts (E11) with acme nut (E13) in the space between them.

D – Non motor clamp bearing Assembly



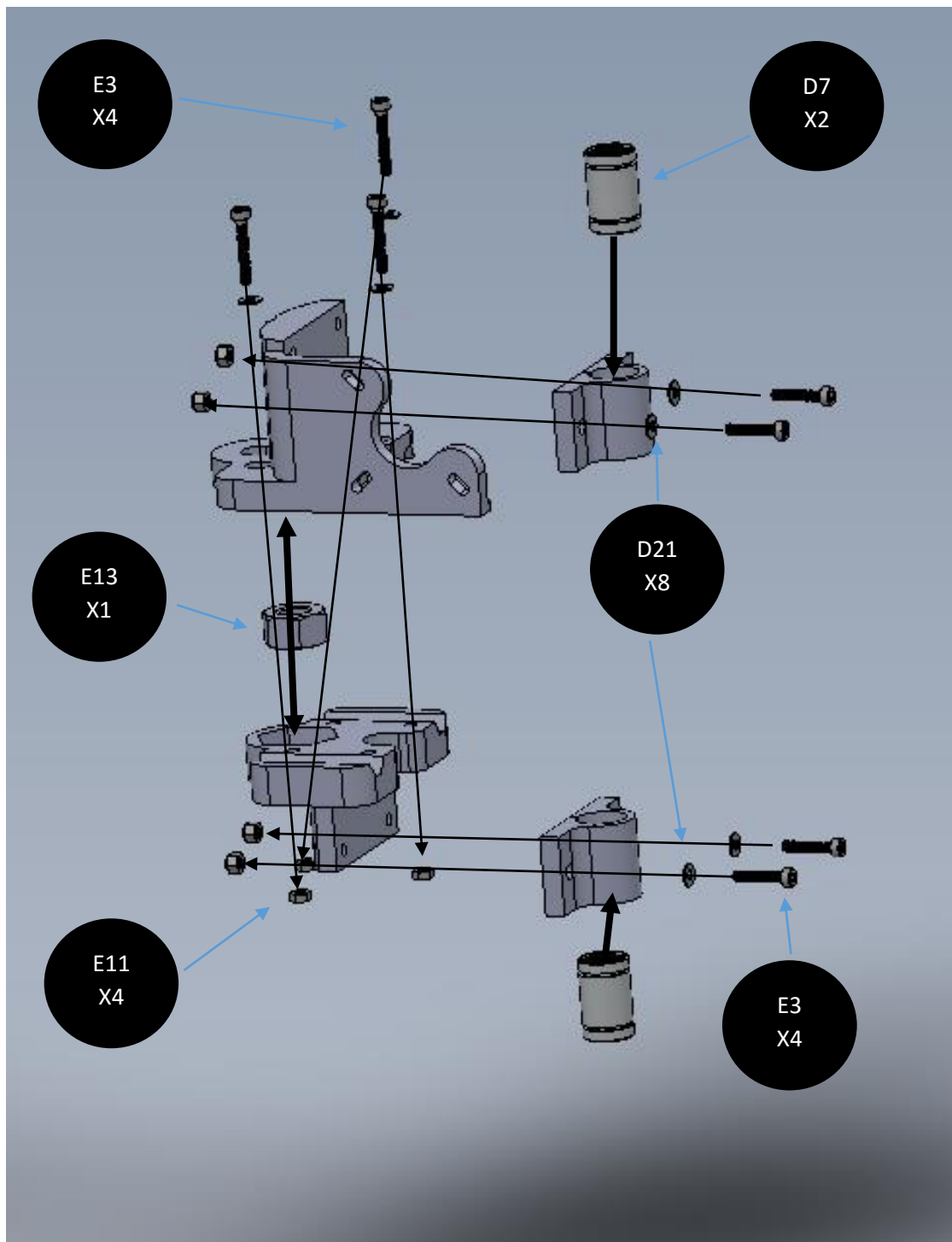
Insert bearings (D7) into holder (D6)
then attach both to (E5) and (E7)
using four M3 X 20 mm (E10) bolts
four M3 washers (D21) and four lock
nuts (E4)

E – Non motor Belt Bearings Assembly



Attach bolt (D15) to (E7) using a washer (E12) and two bearings (D8) securing with lock nut (D16)

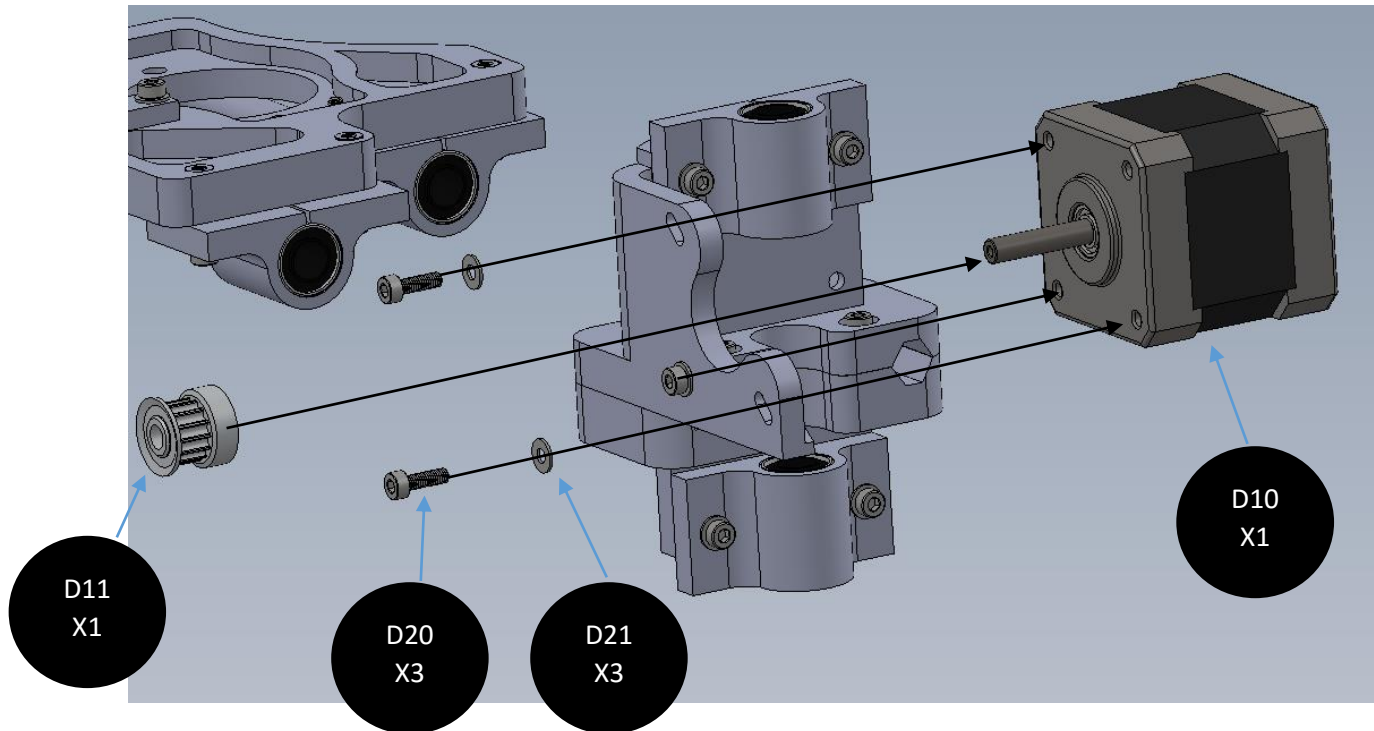
F – Motor End Rod Clamp Assembly



First attach (E5) to (E7) using four M3 X 20 bolts (E3), four washers (D21) and four M3 nuts (E11)

Next slide bearings (D7) to bearing holder (D6) and attach both holders to (E5) and (E7) with four (E3) bolts four washers (D21) and four M3 nuts (E11)

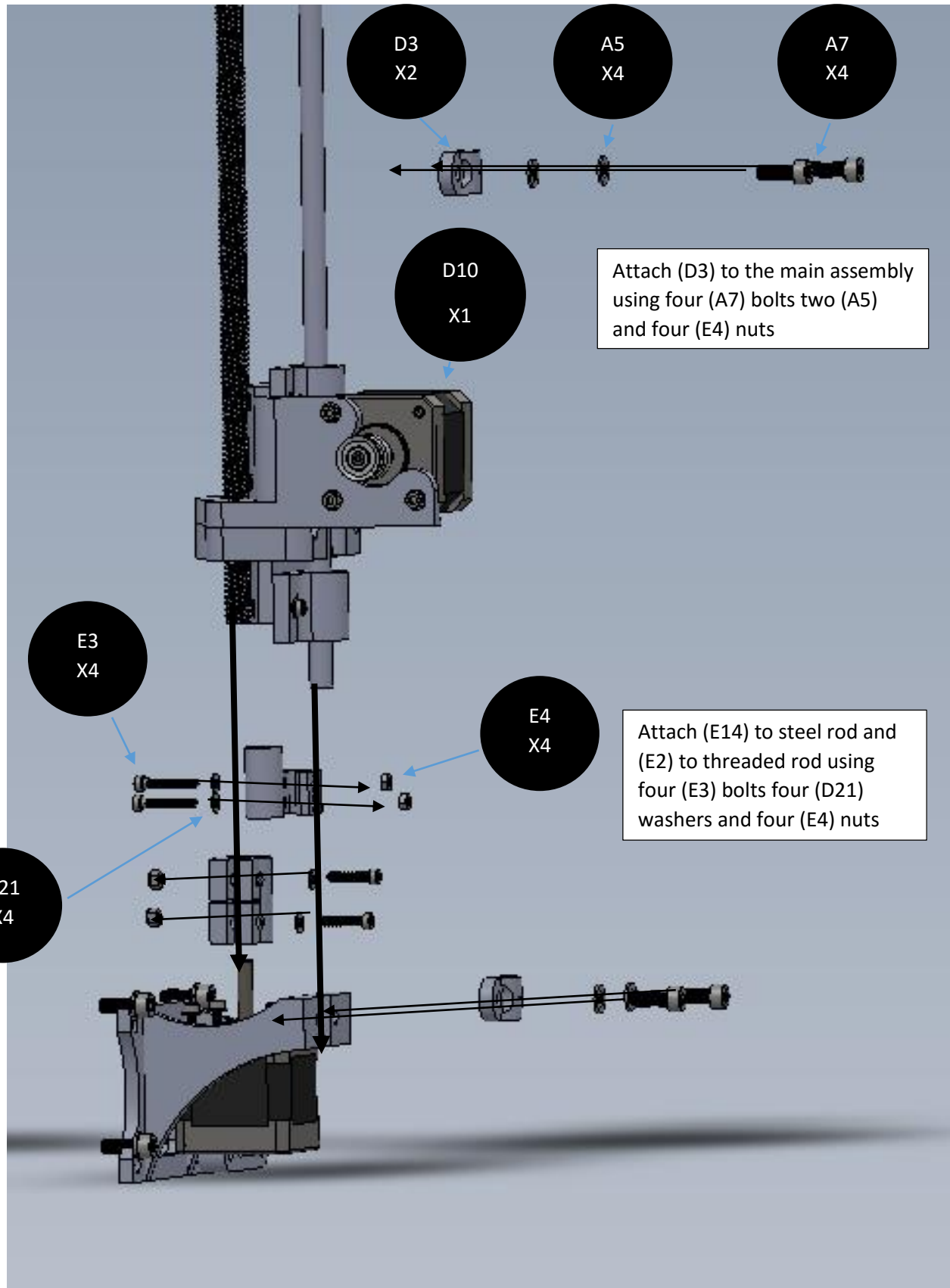
G – Motor End Motor Assembly



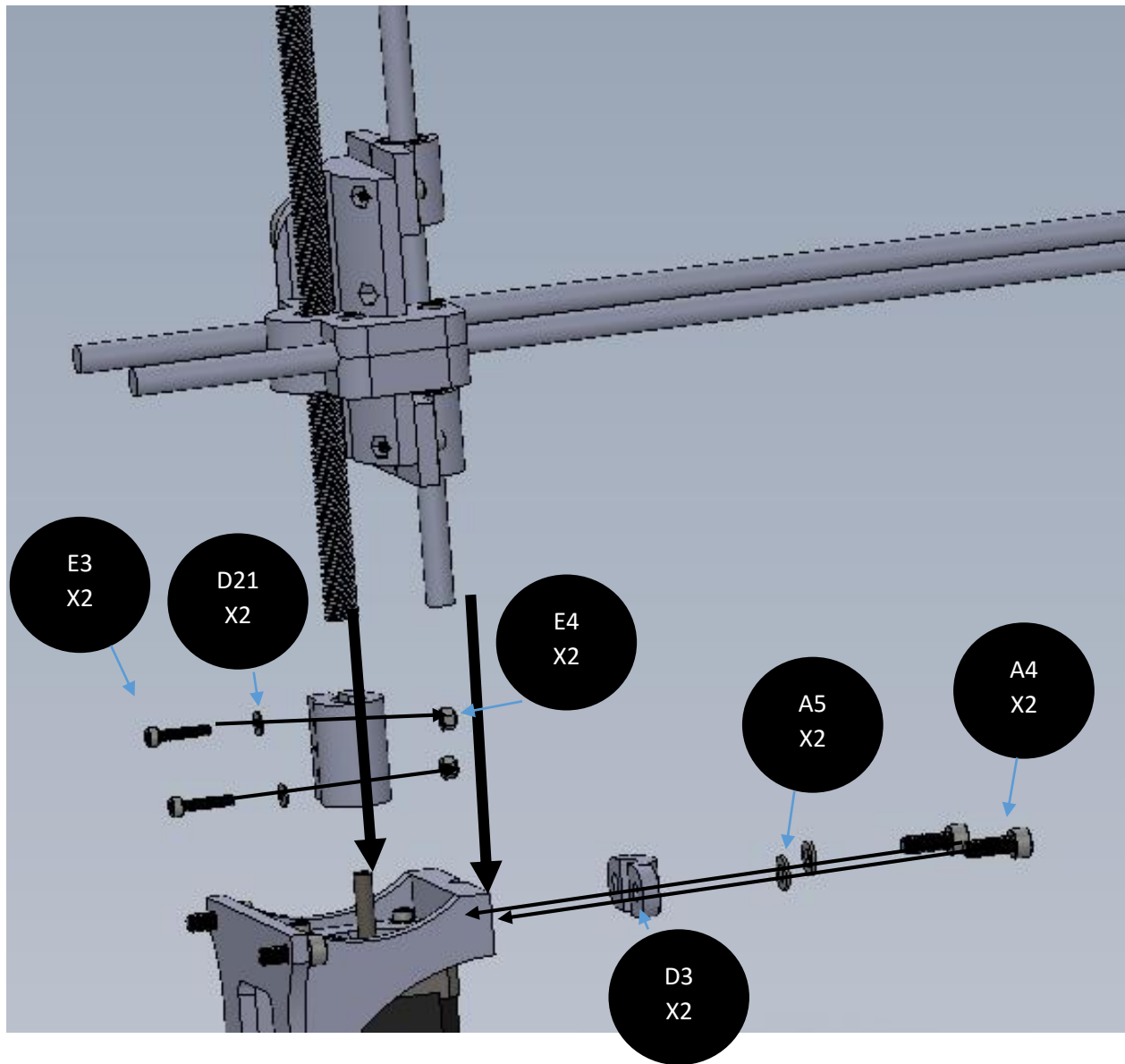
Attach motor (D10) to assembly with two (D20) bolts and two M3 washers (D21)

Next slide (D11) onto motor axle and secure with hex nut

H- Y Axis Motor Rod Assembly

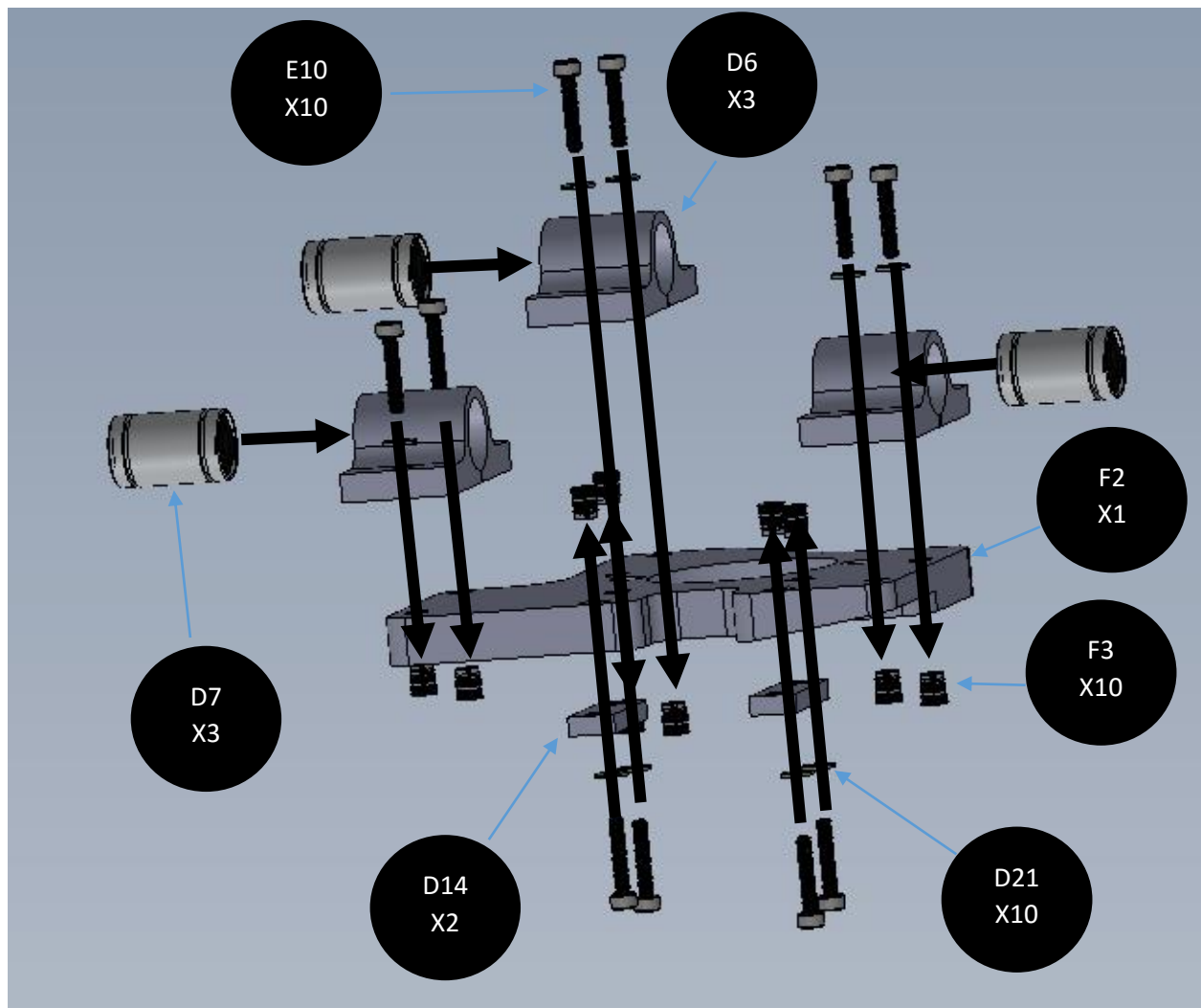


I - Y axis non motor Rod assembly



Attach (D3) and (E2) on the other end of the assembly using same hardware

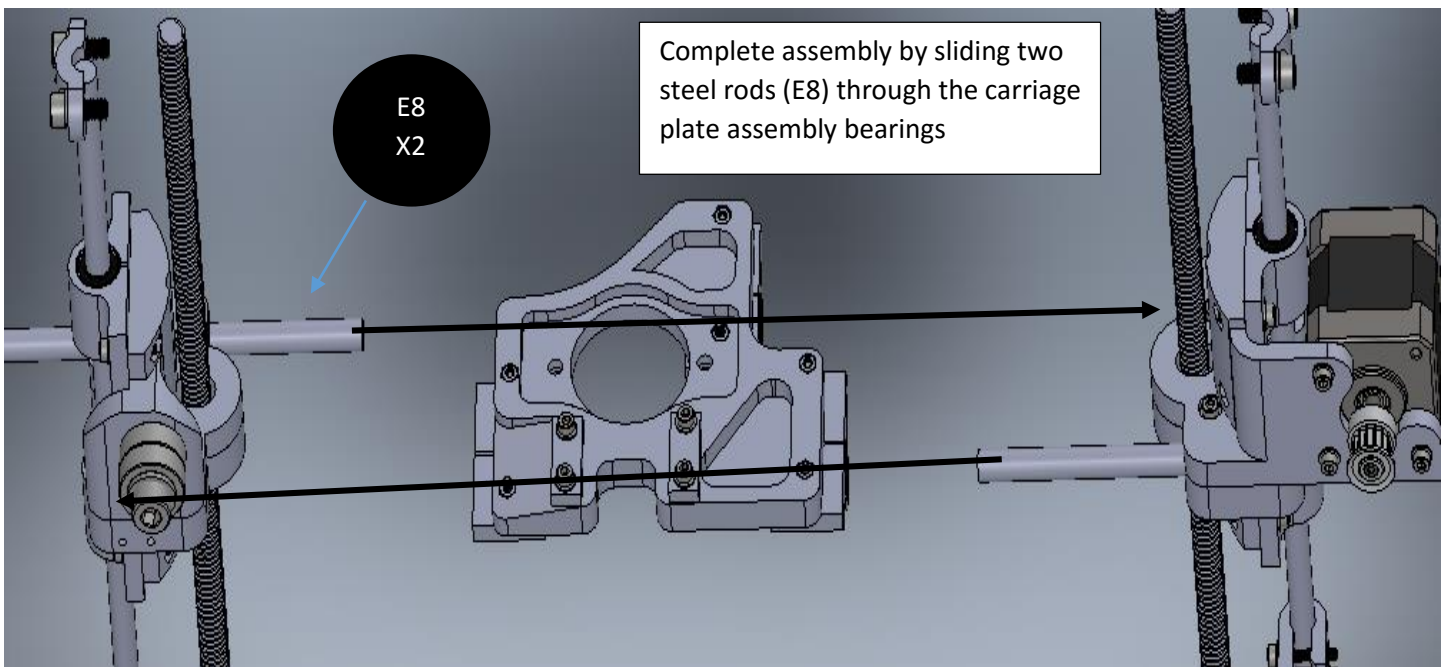
J - X Carriage Assembly



First slide bearings (D7) into holder (D6), next attach holder to plate (F2) using six (E10) bolts, six (D21) washers and six (F3) nuts

Next attach (D14) to the bottom of plate (F2) using four (E10) bolts four (D21) washers and four (F3) nuts

K - X Carriage Rod assembly



Complete Assembly

